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# CHILDREN

# AND

# CHILDHOOD

BY

N. NIEMEYER

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# PREFACE TO STUDENTS

STUDENTS of child study often have one great difficulty. It is, to see the subjects treated by Psychology, in the real gambols and sayings of living children. The difficulty has arisen partly because the earlier psychologists naturally studied mature minds, for they wished to see mental life in its completer forms; and so there were comparatively few studies made of children. But now, thanks to Professor Sully, M. Preyer, Professor Dewey, Professor Findlay, Mr. C. Burt, Dr. Freud, Dr. Montessori, and many other psychologists, teachers, and doctors, a solid body of knowledge about children has been created. We may reap two advantages. First, we can see perhaps more clearly than before which are the essential differences between a child and a full-grown person. Secondly, we must admit now that there are certain stages of growth, and certain tendencies at each stage, which are common to most children.

How can we arrange this knowledge so as to bring it closest to the children who sit in our classes, and shout and play outside? Perhaps by arranging the 'subjects' treated in Psychology books in connexion with the main stages of growth. For at certain times most of those main subjects are likely to become very marked. Thus we may keep closest to life; and to do so is the purpose of the arrangement of this book.

But two things must be remembered. The first is that the arrangement of subjects under ages does not mean that the subject belongs only to that age. To hold such an idea would disqualify any one for child study for ever after. Who could think that Imagination only belonged to children of 5–7 years old ? What the arrangement means is that during those years of life, Imagination is likely to be growing and exercising itself, and that it has then a peculiar relation to the rest of life. There is a second thing to be remembered. It is this : that a book of child study can only suggest the probable development of a particular child. For one child is forward, one backward, and all the others various in degrees past all counting.

A book such as this one is only half contained in its own pages. Side by side with it, in the reader's mind, there should walk the shape of some child whom the reader is trying to understand. Then the child will correct the book, with constant touches of contradiction and agreement. May the book help to interpret the child.

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# PART I

## SECTION I

## CHILDREN FROM 1 TO 5 YEARS

### Table showing Average Height and Weight from Birth to Three Years[1]

| | *Weight.* *lbs.* | *Height.* *ins.* |
|---|---|---|
| Birth | 7·5 | 20 |
| 1 year | 21·625 | 30 |
| 2 ,, | 28 | 33 |
| 3 ,, | 34 | 36 |

### i. *Nerve and Muscle*

Many people think that children are incomprehensible, and because of this opinion they remain quite vague in mind about them. Certainly the differences between children and grown-up people are very great. But this makes them easy to see. To observe a definite difference clearly is already something, for then we know exactly what it is that needs explanation. And many such differences are actually explainable. The following is a case in point. It shows one difference between a baby and an adult—a difference apparently trivial.

A mother's diary lies open before me. '10th week. M. is beginning to take notice.' 'Beginning to take notice' means that M. is just able to fix a steady gaze of both eyes upon a ball hanging straight in front. Has he not done so before? No. In the first few weeks of life he was like all normal little babies, and squinted very often, and often he looked about vaguely, his two eyes looking not quite to the same point, so that he did not seem to be 'taking notice'. An adult darts his glance straight to one point, immediately, automatically, in a characteristic, decided way. This is a difference of which we can understand the cause perfectly well; and when we do understand it, we shall also understand what underlies the awkwardness of little children, and what underlies Montessori work and Dalcroze Eurhythmics. What had M. to do, in order to look at his ball ‘ properly ’, according to ordinary adult standards ? The ball hung straight in front. Hold a pencil straight in front of another person, move it slowly forwards, and watch the eyes. Each eyeball turns gradually inward towards the middle line, for the natural ‘ look ’ of either eye is slightly outwards, thus \/. This inward movement is called Convergence. Baby eyes look much more outward than adult eyes ; and so M. had to converge more than we should.

---

[1] From Hewer, *Our Baby*, p. 64.

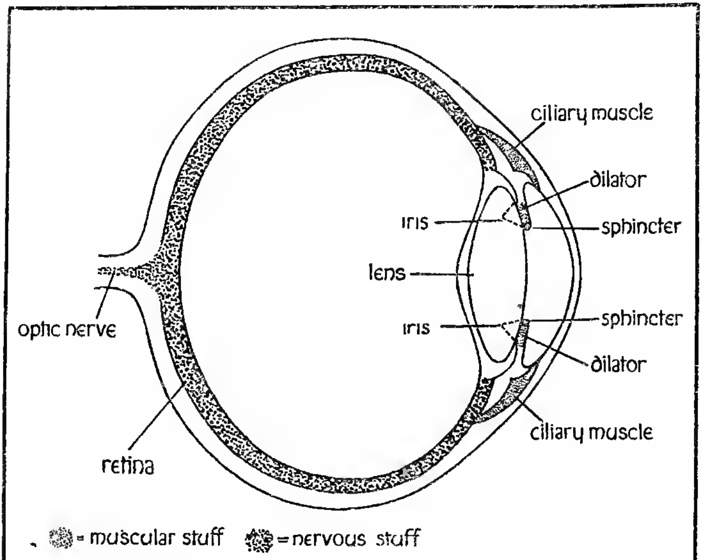


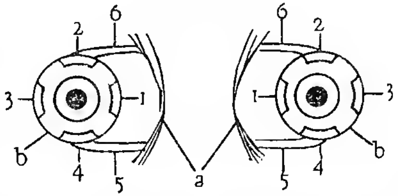
DIAGRAM I. SECTION ACROSS THE EYEBALL

To see at all, M. has to make two other movements. One is quite familiar, for it can be seen. It is the alteration in the size of the pupil (Diag. 1), in proportion to any change in the amount of light. The other movement cannot be seen, because it takes place inside the eyeball. The movement is necessary for the following reason. We see a thing by the rays of light reflected back from its surface. These rays are parallel.[1] Yet, to see, we must draw them together on a point at the back of the eyeball—on the retina (see Diag. 1), the real 'seeing' part. This bending of the rays is done by the lens (see Diag. 1). If the object seen is near, we have to bend the rays a great deal; the lens becomes very rotund. If the object is far off, we need only bend the rays a little, and the lens becomes more slender in shape. We are constantly accommodating the shape of the lens to the amount of bending required. This change in the shape of the lens is called Accommodation. Thus M., like a prince with three tasks to perform, has to learn three things — convergence of the two eyes, regulation of each pupil, and accommodation of each lens.

DIAGRAM 2

To show insertion of six muscles upon the eyeball

Front View



1. Inside straight muscle
2. Upper straight muscle
3. Outside straight muscle
4. Lower straight muscle
5. Lower oblique muscle
6. Upper oblique muscle

a. Edge of bony cavity in which eyeball is placed
b. Eyeball

All these three things are movements. Probably every one knows that it is by the action of muscles that we move. In Diag. 1, the muscles within the eyeball are marked in fine dots. In Diag. 2 are shown the muscles outside the eyeball. These muscles, like all others, are made of one kind of body-stuff—'muscular' matter. The converging movement is performed by No. 1 in Diag. 2, the regulation of the pupil and the accommodation of the lens by the three muscles marked on Diag. 1. But no muscle can start its own motion. How are they set working?

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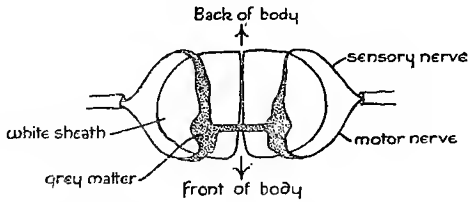
[1] They are roughly parallel when the object is 20 ft. or more from us. If the object is nearer, the rays diverge thus <. For near objects, more bending of the rays is necessary.

DIAGRAM 3



SECTION ACROSS THE SPINAL CORD

In Diag. 1, two sets of parts are shown, clearly, for two shadings are used. The parts dotted finely are muscles; those dotted coarsely are made of quite different body-stuff. It is 'nerve' matter. The nerve matter marked upon Diag. 1 has one special power. Each bit is excitable by light, and can send its own excitement right through the nerve matter of similar make beside it, and along the optic nerve (see Diag. 1). The travelling excitement is called an impulse. It gives the signal for a change in the shape of the lens or in the size of the pupil. It is thus the sensitive retina of the eye that gives the signal,[1] and the muscles inside the eyeball and out that do the work. But how does the signal pass from retina to muscle? From the retina, the optic nerve (see Diag. 1) runs back to the rear of the brain. From the muscles of the eyeball, three nerves run back to the central core of the brain, towards its lower end (see Diags. 4 *a* and 5 *b*); and the optic nerve is connected with them in a very special way. We can best understand it by understanding a very simple, similar arrangement, existing in the spinal cord. Diag. 3 shows a section across the cord. The shading shows that the grey

[1] It is for the sake of this retina that the other structures of the eye exist. The whole eye is a contrivance to allow one part to be specialized to the highest degree of sensitiveness to light. Similarly in the ear, some nerve matter has special sensitivity to sound; in the tongue, to taste; in tiny spots scattered broadcast over the skin, to heat, cold, contact, pressure; in certain nerve-patches within muscles, to the feeling of moving.

matter within the white sheath of the cord is nervous; it shows, too, that this matter is of two kinds, one lying towards the back of the cord, the other towards the front. To grasp the difference between these two is the essential point. Like the nervous matter of the retina (see Diag. 1), the matter lying towards the back is 'sensitive', or 'sensory'. Its power is, to feel excitement caused by impressions from outside the body. These impressions come to it by the nerve matter—'nerves' in the ordinary sense of the word—lying between the spinal cord and the sensitive nerve patch which feels the stimulus from outside. These nerves consist of long fibres, made of 'sensory' matter, enclosed in white sheaths. In Diag. 3 the sensory nerve can be seen running into the back of the cord. Not only does the sensory matter in the cord feel the excitement, but it also transmits it. It transmits it to the nervous matter lying forwards. This second kind of matter has a different power from the first. It receives excitement from sensory nerve matter and transmits it through 'nerves'[1] of its own sort to a muscle. There the excitement causes certain changes, and the muscle contracts. We move. This nerve matter is 'motor'.

If we could examine the meeting-place of the two kinds of nerve matter in the cord, we should find that each ended in a fringe of the minutest threads. Those made of motor nerve-stuff nearly meet those made of sensory nerve-stuff—nearly, but not quite, for they are separated by the thinnest, most delicate barrier. Through it, excitement can and does pass. It does so with difficulty the first time; more easily the second time, and more and more easily each time after. Thus there is a junction, where passengers from the sensitive part change for the muscle.[2] The nerves of the spine belong to internal organs or body muscles. The nerves of the eye run into the brain. It is there that we must look for the exact explanation of eye movements. But in the brain we shall find the main outline similar to that in the spinal cord.

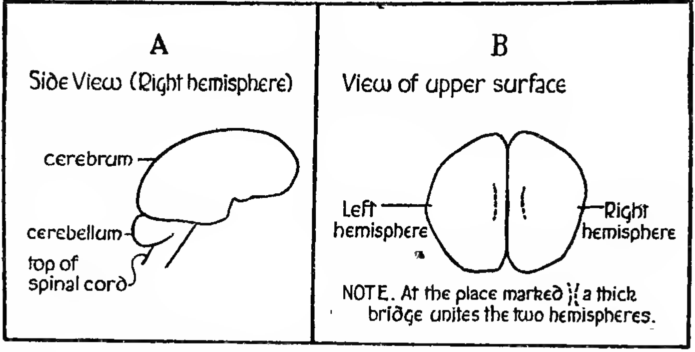
---

[1] These nerves are called motor nerves. They are shown entering the front of the spinal cord, in Diag. 3. This diagram also shows the two nerves, motor and sensory, running away under one sheath.

[2] Usually the impulse makes its way to its own motor nerve, or rather the greater part of it does. The rest passes through the sensory matter of the cord upwards or downwards. Motor nerves run into the cord at thirty-one points; and at any one of these points, the impulse can run out along that nerve, and make that muscle work, as well as its own muscle. There are thirty-one motor, and thirty-one sensory nerves on one side of the cord, and an equal number on the other side.

Diags. 4 *a* and *b* show the general shape of the brain, (*a*) sideways, and (*b*) from above. Diag. 5 *a* shows the inside, and 5 *b* the outside of the right hemisphere. Upon both, certain areas are marked. Clearly, two kinds of area are shown, one lying chiefly on the outside, and the other chiefly on the inside of the hemisphere. The areas marked :::: are composed mostly of sensory nerve-stuff, like the sensory parts of the cord. Into these 'sensory areas' run twelve sensory nerves. The optic nerve runs back to the visual area (see Diag. 5 *a*). The area marked $\begin{smallmatrix}\times\times\times\\\times\times\\\times\times\times\end{smallmatrix}$ is the 'motor area'. It is made of motor nerve-stuff, like the motor nerves. It contrasts with the sensory areas. It is unlike them in another way. They lie more or less upon the outside of the hemisphere. It penetrates from the middle cleft right into the hemisphere. It lies in it like a core in a fruit, or like a funnel, the top of the funnel opening out towards the top of the hemispheres.[1] In this motor tract, every sensory area has its own special part; for example, the visual area (Diag. 5 *a*) lies close to the lower part of the motor tract, and in this

DIAGRAM 4. THE BRAIN



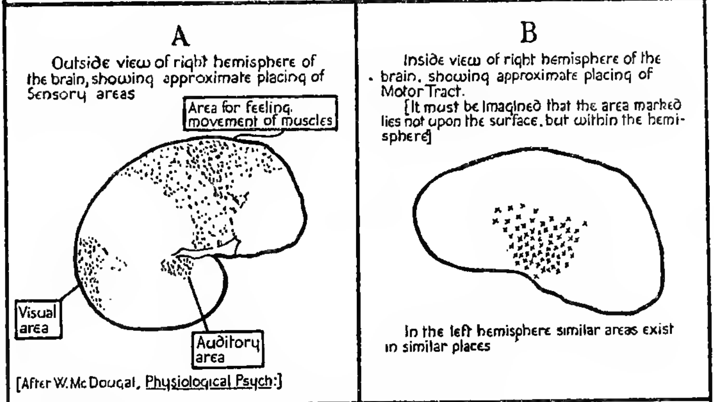
NOTE. At the place marked )( a thick bridge unites the two hemispheres.

---

[1] Professor James's description, *Principles of Psychology*, i.

very part of the motor tract lie the endings of the three motor nerves 'running back to the brain' (p. 4) from the muscles of the eyeball. Suppose that the sunlight grows stronger; the retina is excited by the change; it becomes necessary to alter the size of the pupil. The exact steps of the change are these. The alteration of the light excites the retina, and an impulse passes from it along the optic nerve to the visual area of the brain. It crosses over into its proper part of the motor tract. It runs into the three motor nerves above mentioned—the nerves which go to the muscles outside the eyeball. That creates a difficulty; for it is the muscles *within* the eyeball (see Diag. 1) which contract the pupil, and contraction is needed. The two muscles are the ciliary muscle and the ring of muscle round the iris, called the sphincter (see Diags. 1 and 6). How are they to be reached? The contrivance is quite simple. One of the above-mentioned

DIAGRAM 5



A: Outside view of right hemisphere of the brain, showing approximate placing of Sensory areas

[After W. McDougal, Physiological Psych:]

B: Inside view of right hemisphere of the brain, showing approximate placing of Motor Tract.
[It must be imagined that the area marked lies not upon the surface, but within the hemisphere]

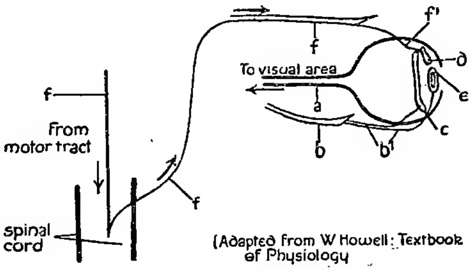
In the left hemisphere similar areas exist in similar places

NOTE. The position of the tactile area is too uncertain to be marked.
The visual area, and the area for the feelings of muscular movement, are explained in the text.
The auditory area is that which receives sound-stimuli from the ear.
The tactile area is that which receives from the skin contact stimuli, and also stimuli which we use to tell us where the contact is. The skin sends to other areas impulses aroused by heat and by cold. All these are included in "Touch" in ordinary speech; and often the sense of muscular movement is included as well. The places of these are as yet very uncertain. There are probably many other areas which are not shown here.

motor nerves passes close to the two muscles, though outside the eyeball. Special motor fibres run within the sheath of this motor nerve, and, when they get within the eye's bony socket, these special fibres branch away from the main nerve, and run straight, one to the ciliary muscle, the other to the sphincter. Thus the path is complete. The impulse flashes from retina through the visual area, motor tract, motor nerve, to muscle. The pupil contracts.

DIAGRAM 6

To show the Motor Nerves which (i) contract the pupil (ii) expand. Parts a-e illustrate (i), parts d, f, f' illustrate (ii)



(Adapted from W Howell: Textbook of Physiology

a. Optic nerve
b. Motor nerve running to muscle outside eyeball
b' Fibres to c and e
c. Ciliary muscle
d. Dilator muscle
e. Sphincter muscle
f. Motor nerve running to face muscles
f' Fibres to d

As light grows fainter the pupil needs to be enlarged. The muscle to be used is the tiny muscle within the iris, marked 'Dilator' on Diags. 1 and 6. None of the motor eye-nerves reach it. But there is a certain motor nerve which begins in the motor tract of the brain, runs down into the spinal cord, and then, through the base of the brain, up again into the upper part of the motor tract. Passing forward, it branches to various muscles of the face, and one branch passes very near the eye. Within *this* nerve special fibres run, and branch away, and reach the dilator muscle. But how can the visual sensory area get into touch with this nerve? The visual area is connected with its own part of the motor tract; and this part becomes connected by fibres with the above-mentioned nerve at its origin in the motor tract. Thus the circuit is completed. The impulse runs through it more quickly than one can say it; and complex as the circuit is, these nerves and connexions are practically ready to work at birth.

The same machinery performs the work of 'accommodation' of the lens. At first, M. only draws his lens to the right shape accidentally. But when he does so, he 'sees' better than at other times, and so he is always trying to repeat it. He can only do so by the help of the sensory area marked *c* on Diag. 5 *a*. This area is sensitive to certain impressions which most people do not notice at all[1]—the feelings of moving muscles and joints. The area is connected with muscles and joints by sensory nerves, and it is connected, too, throughout its length, with the motor tract. When M. wants to repeat a particular movement, he guides himself largely by the sensations felt through the activity of this area. He tries to get those sensations which he had in making the previous successful movement, and he can only do this if he works his muscle exactly as he worked it before.

M.'s third task—convergence—is the hardest. He must turn both eyeballs inwards with *equal* force. This problem differs from the others, for, in it, the two hemispheres of the brain (see Diag. 4 *a* and *b*) must work together. To turn each eyeball separately is quite simple. The inside straight muscle (see Diag. 2) is contracted by an impulse coming down the motor nerve shown on Diag. 6. The nerve in the left hemisphere manages the left eyeball, and the nerve in the right hemisphere manages the right eyeball.[2] As long as these two nerves work quite separately, M. squints.[3] Little by little, something happens within the brain. On Diag. 5 there are blank spaces between the areas marked. These spaces are largely regions made of the third, last kind of nervous stuff—‘ association ’ matter. Its power is, not to receive impressions, nor to contract muscles, but to make ways for impulses to pass from one circuit to another, otherwise unconnected with it. The association matter binds together eye and ear, ear and hand, lip and tongue, ear and mouth, on the same side of the body. It also binds together the parts on opposite sides of the body in this way. The attempt to see stimulates either eye. Both visual areas (in the left hemisphere and in the right) are excited ; both motor tracts are excited. All these excited regions are lapped round with association matter, through which the two excitements work towards one another. Little by little, an association fibre near the visual area in the right hemisphere grows out towards the left side.[1] It passes across the bridge between the hemispheres (see Diag. 4 *b*) ; it reaches the motor eye-nerves of the left hemisphere. Thus an impulse can pass now from the right visual area to the motor nerves of the left eye. The fibre continues its growth from the left motor region, across the bridge again, into the right hemisphere. It reaches the motor nerve which controls the ‘ inside straight ’ muscle of the right eye. It now connects the right visual area with both inside straight muscles, and both these muscles with each other. The two can work together, in co-ordination. M. can converge. But the association fibres only grow by repeated excitement of the areas beside them. This takes some weeks. When M. ‘ begins to take notice ’, this growth has been made.

---

[1] Sometimes people notice these feelings as oddities. For instance, after dancing or cycling, the feet feel as though they were moving, although they are at rest.

[2] In most other cases, parts upon the left side are managed from the right hemisphere.

[3] Extract 2, Darwin.

The diary of M.’s life mentions other actions in increasing numbers, which show that he had made certain connexions.

| | |
|---|---|
| ‘ 10th week. | Beginning to take notice. |
| 14th week. | Smiles when talked to. Follows a moving light with his eyes. |
| 17th week. | Began to kick in the bath, and to take hold of things. |
| 19th week. | 17th Nov. Had first bottle.<br>21st Nov. Took the nose of the bottle in his hands, and put it into his mouth. |
| 33rd week. | I notice (*a*) M. can now take hold of the ball hung in front of his cot.<br>(*b*) When an object is dropped from a hand just in front of him, he goes on looking at the hand, although the object falls on his own legs.’ |

---

[1] And vice versa.

Some of these sentences show just how far M. had got in 'associating' the two eyes, eye and hand, hand and mouth, hand and foot.

### ii. *The Brain and Education*

I have explained such a simple act as looking so fully because so much growth lies behind it. Thus much, and more, lies behind the other movements of a little child. Fifty years ago, nurses were excusable when they set little girls to sew a narrow seam with a fine needle, and slapped little boys for awkwardness; such things were excusable more recently than fifty years ago, for the knowledge about the brain is quite recent. Now, there is no excuse even for any one who hurries a little child trying to lift a brick, or move a stool. Such a one demands impossibilities. A little child cannot do these things quickly. Little children have not the necessary connexions between sensory areas, and therefore they cannot do complicated things, just as we grown-ups, not having wings, cannot fly. If a child practises, and tries, he will make these connexions (see p. 16). Let him pour water from jug to jug, let him tear paper, let him drop stones into a tin, let him pile and unpile, let him waggle and kick, let him do it all quickly or slowly, as he can. This is his work; and he crows with delight when he can adjust his muscles so as to stand. We must reshape our ideas of waste of time, when we are dealing with little children. Our work is not to 'save time' and 'get things done', it is to give *his* work the conditions it needs. There are three preliminary conditions, apart from more special ones. The first is freedom of movement; a freedom which can easily be restricted by faulty clothing.[1] The second is nourishment—both food and rest.[2] The third is suitable furnishing, that is, large things to play with, and small things to use. Usually we give children tiny little toys, and furniture made for grown-up people. The toys ought to be large, because large movements need simpler nervous connexions, made earlier, than the connexions required by little finicking movements. To see large things clearly needs less contraction of the lens, and consequently less effort of the ciliary muscle, than to see small things.

---

[1] See M. B. Synge, *Simple Garments for Infants*, Longmans, 1914.

[2] See *Our Baby* (Mrs. Hewer).

An immense respect and care for the growing eye and the growing brain ought to be the inevitable result of a knowledge of their working. This knowledge is the foundation of the most important modern teaching of little children—Mme Montessori's. Mme Montessori learnt her work from normal Italian children about 2½ years to 4 years old.[1] Perhaps we should apply her results to English children from about 3 to 4½ years. Her main principle is :

> 'The completion of the minute structure of the brain . . . is a very real labour . . . This difficult, inevitable labour . . . is the work of the (little) child.'[2]

And she believes that there are two things which a child ought to obtain—fineness of sense (i.e. sensory areas definitely changed and made very sensitive by frequent stimulation), and control of movement (i.e. visual areas, 'touch' areas, and sensory areas for feelings of movement connected with many fibres). One can get these two things only by practice. Every one has practice, in moving and handling things in daily life. But it is miscellaneous practice. It is not practice on material chosen to bring each sense to its best, or to train each important sense. And, in daily life, children's acts especially are often hurried, interrupted, and unregarded.

Mme Montessori claims to have made material specially adapted to stimulate the sensory areas, and other material specially adapted to practice co-ordinated movement. The 'sensory' exercises are those which have become famous. The exercises are grouped : (i) *mainly* for the eye ; (ii) *mainly* for the sense of touch ; (iii) *mainly* for the sense of moving muscles. But besides the primary intention, each exercise serves others. Again and again Mme Montessori points out that no one part of the brain and mind ever works alone. Eye and hand work together almost always. In doing one of the 'touch' exercises, a child is 'not only improving his power of feeling tactile differences, but performing a movement, of which he is ever gaining greater mastery'.[3] In any of the 'sensory' exercises there is a very great deal of motor practice.

---

[1] The first work she did was with abnormal children, but she worked out her training for normal children experimentally with normal children.

[2] Dr. Montessori's own *Handbook*, p. 5.

[3] Op. cit., p. 43.

The material *mainly* for the eye consists of three groups. The first group consists of three sets of wooden cylinders, ten in each. The ten fit into holes arranged in a row in a block of wood. In the first block, the cylinders grow less in circumference. In the second, they diminish in circumference, and also in height. In the third, they are all the same size round, but they grow shorter and shorter. The work (or game) is to take the cylinders out, mix them up, and put them back right. The second group, again, consists of three sets of bricks—the Tower, the Broad Stair, the Long Stair. The Tower is made of ten bricks graduated in size; the Broad Stair is made of ten bricks of equal width, graduated in depth; the Long Stair is made of ten bricks of the same depth, graduated in length. With each the work or game is to mix the ten bricks, and rearrange them in right order. The third group addresses itself to judgement of colour. It consists of sets of 64 coloured cards: eight shades of crimson, eight black to white, eight of blue, of orange, of violet, of green, of brown, of vermilion. The child uses two sets and matches the shades. Or, taking one colour only, he lays the eight shades in graduated order.

The second large division of the material is meant to educate the ‘sense of touch’.[1] Its first part is a board, half rough, and half smooth. The second part consists of sandpaper, of varying grains. The third consists of rags—of cotton, of linen, velvet, silk, wool.

The third large division of the material also trains touch, but it trains something more, the sense of the movement of muscles. The material consists of ‘insets’. There is a small chest, of six shallow drawers. Each drawer holds six ‘insets’. An inset is a shape, cut out in thin wood. It fits exactly into a hole, cut in a wooden block like a tile. These wooden ‘tiles’ can be lifted out of the drawer and placed in a rack frame, which shuts down upon the joins, and holds the ‘tiles’ fast. But the inset in each tile can be lifted out by a little knob fixed in it.

The child has a frame full of tiles fitted with insets. He takes the insets out, and tries to replace them, and he finds it rather difficult. The teacher teaches him to look at the shape, and to feel round the edge of the inset with two fingers, and then to feel round the edge of the hole. He must do this softly and evenly. He can do it as slowly as he likes. Then he puts the inset back. Thus hand and eye work together. Later, the child is blindfolded, takes out the insets, and finds their right places again just by feeling.

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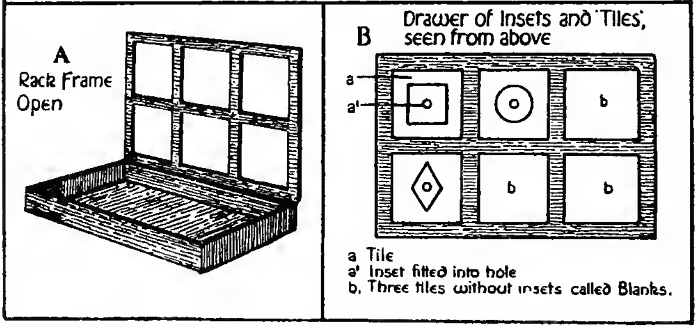
[1] i. e. the composite experience from nerves of heat, cold, and pressure.

There are groups of material, too, for the education of hearing and of minor senses. Next come the groups of material designed for Motor or Muscular Education. Mme Montessori says:

> 'Muscular education is concerned with the primary movements of everyday life . . . the care of the person, and of household things, gardening, manual work, gymnastics, and rhythmic movements.' [1]

DIAGRAM 7



a Tile
a' Inset fitted into hole
b, Three tiles without insets called Blanks.

Actually children do these things, and must do them, but they are hardly taught to do them at all. They are often hurried over them, and scolded. Consequently, the earliest formal lessons are lessons in lifting little chairs, washing hands in low basins, fetching toys from low shelves, using small brooms. More difficult movements—lacing, buttoning, tying—are taught by practice; edges of cloth are fixed across frames, and the edges have to be laced, buttoned, or tied together.

Such is the material. One child acted towards it in the following way.

Philip was small and badly fed. He was dirty, and had a bad inflamed whitlow on his finger. He had rickets, and his eyes watered and were a little bloodshot.[1] He sat with his head drooping, staring on the ground.

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[1] Montessori, *Handbook*, p. 21.

Monday was his first day at school. He did not answer, nor speak of his own accord. He sat on a mat, and soon laid hands on his neighbour's picture-book. But the teacher put the first set of cylinders beside him. He took them all out, and put them all in again. He did this again, and then again. After a little while he got the cylinders again, and sat resting his arms on them, his eyes on the ground, in a maze. On Tuesday, after work had begun, Philip appeared in the doorway. He stood there very shyly, sometimes biting a piece off a slice of bread. He sat down on a mat, and ate the bread up. Finding the cylinders beside him, he took out each one, looked curiously at the bottom of it, and put it back. Then he sat still, and sat there inert. In the afternoon he hugged the box of cylinders in his arms for the whole of the occupation time, but that was all. He would not answer. He held his head down, and would not even look at the teacher. On Wednesday, after work had begun, Philip arrived, and stood in the doorway, crying bitterly. He allowed the teacher to bring him in, and sat down, sniffling, and eating a bit of cake. He awoke to find the frame beside him, with three insets in it, and three blanks. Philip undid the frame and took out the three insets. He put the three blanks in a neat pile and then replaced them. He fitted in the insets, and closed the frame carefully. He did this again, varying the places of the different pieces. He did this eleven times in all.

After this day, Philip was absent from November until January. When he came back he returned to these same toys, to beads, and to the motor material. About the end of February he began to choose the buttoning and lacing frames.

'Feb. 21st. He had the large buttoning frame, kept it for a whole period, fastened and unfastened it three times. Long pauses between each button—sometimes a sudden spurt, and three or four buttons done.

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[1] Because of conjunctivitis (inflammation of the covering of the eyeball). 'School baths, clean sleeping, and clean clothes, would abolish practically . . . all school children's eye diseases.' Deptford Health Centre Report 4, p. 6.

Feb. 23rd. Fastened the patent fastener frame. He was interested in this.

Feb. 25th. Had the large button frame, for the whole period. Fastened and unfastened it three times.

March 2nd. Philip had the buttoning frame, then the tray of insets. He felt round these at the teacher's suggestion. He enjoys this, and does it well.

March 3rd. Had the tray of insets, felt round them, and fitted them in. Then he had the difficult buttoning frame, and struggled hard with it.'

What difference did all this work make to Philip? Philip put each cylinder into its own hole repeatedly. In so doing he judged size. We judge size by the size of the image on the retina. Philip compared the apparent size of the hole and the apparent size of the cylinder. But the hole and the cylinder were not at exactly equal distances from his eyes. So he had to allow for the effect of two different distances in comparing the size of the two images. But before he could judge of distance, he must have connected certain effects upon his eye with certain sensations of movements in his muscles. For our judgements of distance depend upon an idea of what it would be like to move to the object. Thus before he could put a cylinder in the right hole with certainty, Philip must have changed. A certain growth must have taken place in his brain. The visual area must have been connected by association fibres with the area for the feeling of moving muscles. In playing with the cylinders Philip was prompting the growth of these fibres, which, once grown, he will never lose. His judgements of distance and size were becoming more and more accurate. His mind was growing.

He had played with the insets a good deal. In doing so, he saw the inset, and handled it at the same moment. Eye-feelings and muscle-feelings and 'touch'[1] feelings were excited together, in brain and mind. When he was blindfolded, and felt round the insets, the feelings of 'touch' and the feelings of moving muscles were excited together, and he attended to them very carefully. We get our ideas of shape from recollections of such experiences as these. 'Shape' = the feeling of seeing something + the feeling (what it would be like to move the hands[2] round it). Philip was storing up recollections of

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[1] i. e. feelings of contact, heat, and cold.

[2] Or other sensitive part.

'touch' experience; and those simultaneous 'touch' and sight experiences caused permanent growth of association fibres in the brain. This growth and this experience will sharpen his aptitude to see shape, always afterwards.

These two points show how Montessori work is based upon a knowledge of the growth of the brain in its immaturity. Mme Montessori claims that this work upon the brain-stuff is very important, that it requires special time and means, and that babyhood is the time. But she knows that a child has a mind as well as a brain. In babyhood, she says, plain sensory and motor experience, simple as it is in the cylinder game, does interest children. As to this interest, people must satisfy themselves by watching a case like Philip's. Moreover, in watching a child 'at work' with cylinders, one cannot but notice the immense work of curiosity, comparison, and judgement. A child, doing Montessori work, is often a true pattern of 'thinking'.[1] The deeper effects on Philip's behaviour and happiness must be reckoned into the total account in addition.[2]

### iii. *The Brain and Habit*

Nervous impulses[3] act in the way described on p. 11. The first nervous impulse breaks through the barrier into the motor area with difficulty. But it leaves an easier passage-way for a second impulse. And the second leaves an easier passage for the third, and so on, with accumulated effect. At last, if we repeat the movement often enough, we only need to start it, and it carries itself through, without our thinking of it. We call such actions Habitual actions. What man has done, he tends to do. Because we have this tendency in us, it is inevitable that our bodies should fall into habitual ways. Habits are inevitable, but we can decide what our habits shall be. A baby has his habits all to make. A new body has to be taught its work, and it can be taught to work in good ways, or in bad ways. Consider the following case.

Excretion is a very important function. It completes the work of the lungs. The lungs pour fresh oxygen into the blood, and the excretory organs[4] take waste from the blood, and throw it out of the body. A baby's excretory organs, and the clean little waste pipe, called the intestine, are ready to work soon after birth. Like other creatures, babies have an innate tendency to excrete at fairly regular intervals. The recurrence of the need is called the 'Rhythm' of excretion. Each baby has its own rhythm, and each mother finds this out. But the rhythm can easily be destroyed, for the nerves and muscles of the stomach and intestines have no fixed habit as yet. Sometimes, too, the intestine gets stopped up. This condition is called constipation. The intestine can be set working again by fruit juices, which stimulate the nerve-endings in the intestine, to send vigorous impulses to the muscle. It can also be set working by massage, which strengthens the muscles, and so enables the intestine to contract strongly. Lastly, the intestine can be affected by oily medicines, such as paraffin, which simply lubricates the inside of the pipe, and is not absorbed. There is another way of dealing with the intestine, quite different from these three. A syringe, called an enema, can be put into the lower end of the intestine; soap and water is syringed in and allowed to come out. The effect is to cause the contents of the pipe to drop, not by a contraction of the muscles, but by physical forces. The enema relieves the nerves and muscles of their work. It does nothing to help them to set up a habit.

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[1] See p. 94.

[2] See pp. 29, 66, 99.

[3] See p. 10.

[4] Kidneys, stomach, intestines.

A certain mother fixed regular times at which she put her little baby upon his chamber. To do this does not mean that there are no wet napkins, but if the baby is set upon its chamber at the times of its natural rhythm, he begins to associate the need and the act, and the number of wet napkins decreases. So it happened with this baby, and this practice made the beginning of a habit. But sometimes the baby's intestine did not act. He was constipated. In making a habit, there is one rule which holds good for every one: 'Never suffer an exception to occur until the new habit is securely rooted in your life.'[1] But in this case, how is an exception to be avoided?

9th week. Began giving M. grape juice before first morning feed.[2]
11th week. Had to give first medicine—paraffin . . . Used the enema.

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[1] W. James, *Talks to Teachers*, p. 68.

[2] As a last resource. Some authorities would condemn even this use, for reasons given above.

| | |
|---|---|
| 14th week. | Still used enema, and massage for five minutes at 10 and at 6.30. |
| 15th week. | Enema used once, but given up during the week. |
| 16th week. | Enema used once. Hot apple juice begun, at 8 and at 4. Began taking him up at 10 o'clock at night. |
| 17th week. | Hot apple juice and massage. Enema once. |
| 18th week. | Apple juice and massage as before. |
| 22nd week. | Had to use enema once.’ |

At five months old the baby ‘ was learning what to do when held out ’. He was weaned at twenty-four weeks, and for two months after that no paraffin was needed, much less any other treatment. The intestines worked properly every day. At a year and ten months old, ‘ left off using napkins entirely. Very hot weather, and I find M. is quite good. No night napkins ’.

It is partly because M. has been brought to a regular habit of excretion, that his eyes and cheeks are bright and fresh, and his attention to little sights and sounds vivid. I., a girl of 10 years old, cannot attend to her school work at all. She has dark lines under her dull eyes, and her pale, fat cheeks look dirty, not outside, but in the grain of the skin. She is heavy and apathetic ; do what she would, the teacher failed to rouse any interest in her. The teacher knew the girl's mother, so that she could talk to her without taking a liberty. She found that the mother had never attended to I.'s habits of excretion at all. I. was chronically constipated. This was not the sole cause of her lethargy, but it contributed to it. And a bad habit of ten years' standing is very difficult to overcome. This is the reason why M.'s mother took so much trouble to set up a good habit. A habit is an economy, both of physical energy and of thought. Fatigue decreases as the force of habit increases. Regular routine—an unbroken round of sleeping, feeding, airing, playing, and sleeping—is consequently the best framework for the life of a little child. Nor will routine become tiresome to a child. He finds his infinite variety in his play and his walks. The more unbroken the humble routine, the greater freedom has the child to think about all the other things, and the ‘ world is so full of such numbers of things . . .’.

There are many children like I. in elementary schools. Children of 9 and 10 are often supposed to be able to look after themselves. At that age they lose their good habits.

Even children of 12 and 13—nay, older people sometimes—neglect the habit of excretion out of sheer ignorance of its importance. So teachers may see signs of the neglect. It is not always the teacher who can train children in this respect. But she can do one thing. Children ask : 'May I go across the yard ?' If a child has had medicine she must be allowed to go. If not, the request means that she wants to play, or else that she is not in regular habits. As far as habits in school hours are concerned, the teacher can give this training. No normal child should need to go across the yard between the beginning of school and play, or between play and closing. The proof of this, and the example of what a teacher can do, is that in many classrooms the request is never heard.

It is not only our brains that are made so that they must make habits. Invisible and intangible as our minds are, yet they are shaped in a definite way, and obey definite laws. When we have thought and felt in one way once, we tend to think and feel in that way again. Our minds submit to habits just as our bodies do. (It is this fact which makes training possible.) And both our minds and our bodies obey the same laws of habit. Professor W. James made a statement of these laws in an essay which had become classical. Not much of the literature of child study will ever become a classic ; and so it is incumbent on all teachers to read this essay, which was addressed to teachers in the first instance. The five maxims laid down there will guide any one who wants to make a new habit, or to discard an old one. Professor James was witty, and so skilful in distinguishing human characters and sketching portraits of men and women, that his acquaintance ought to be made. It would be a mistake to repeat here what he has said, for his book, *Talks to Teachers,* is easily accessible.

### iv. *Instinct*

It is Kit's monthly birthday. Eleven months ago, at this hour, he was just born. Now he is at play in his 'playground'. He has dragged himself up, with both hands upon the rail of the playground; he is looking about the room, and cooing. He shuffles himself along to the corner of the playground, and sits in the angle. Although he is sitting, he holds on with both hands; he seems pleased, and says 'Lalala' to himself. He feels the metal fastening of the corner with his right forefinger, and then feels the beads, strung on the rail, with his left hand, and then rolls down on the floor. Now he pushes himself up on his hands, and rears up his head, laughing and making a pleased sound. He pushes hard, laughs at us, waggles his head, kicks, and falls down. At that he cries rather irritably; he goes on trying to get up, and trying to crawl, and, at last, cries plaintively. Over and over again he repeats all this.

There are three people in the room, and they are not students of children. But all three could tell you what he is trying to do. 'He is eleven months old. He is trying to stand; presently he will stand, and then he'll walk.' 'How do you know?' 'Because every child does it at about his age.' These commonplace answers have laid stress on three very important characteristics of Kit's action. First, all human beings show this same tendency. Secondly, it shows itself at or about a particular time of life. The third characteristic is less obvious; crawling, standing, walking, are the three stages of one train of development. The baby learns, step by step, how to pull himself up, how to rear up the head, how to hold his body up; and to do this, and balance oneself, requires the joint work of many nerves and muscles. It is not one movement that Kit will make when he can walk, but a wonderful series of quick adjustments in a definite order that repeats itself. This 'walking' is a whole chain of movements.

With so many playthings round him, why does Kit ever start amusing himself with pulling up and tumbling down? Something within him started him upon these actions. A complex nervous and muscular mechanism has reached the stage at which he can use it, and begin trying an erect posture. When such a mechanism reaches that point, a driving force stirs in us, and prompts us to use the new thing. Some mechanisms are ready at birth (see p. 15). Many others are not. They come gradually into play[1] as we grow older, each at its appropriate time, some quite early, like walking in the second year of life, others, like full sexual activity, much later.[1] So great is the pleasure that the use of his new power gives Kit, that he tries to stand, over and over again, although plenty of toys lie round him. His pleasure lies in the simple thing itself; he wants the pleasant feeling of getting up and being up, and he is quite happy if he remains erect, tottering, for a second. He will be proud when he can stand properly. A little girl walked alone for the first time, and called out, 'Look, Mummy; look, Auntie!' Many children show their pride and pleasure.[2] Later on, of course, the child will walk, with a purpose; and the power to do so is the ultimate value of walking to him. But at present he does not know this. To walk for a purpose is not the end he has in view.

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[1] See Extracts 1 and 2.

The tendency to walk has exhibited several marked characteristics. In all these it is typical of a whole class of our tendencies to action. Such actions are called 'instinctive actions'. An instinct has been defined as 'an inherited tendency to behave in a particular way, under particular circumstances, without knowledge of the end in view'.[3] We have many actions of an instinctive type, and a long list could be drawn up, arranging them in the order of their importance to us. They might also be arranged in the order of their complicatedness: near the top would come running away when we are afraid; about the middle would come walking; and near the bottom, blinking. The list would include crying, scratching, sucking, winking, starting, crawling, walking, among the simpler actions, and running away, fighting, laughing, and many other more complicated sets of movements. It is with these inherited series of movements that Nature launches us into the world of Experience. But it is not with actions only.

## v. *Instinctive Emotion*

Nature has done more than shape brain and outward action. Human minds, invisible and intangible, exist as really as human brains, tangible though these be; and Nature has shaped our minds and inward feelings in as definite a way as the brain and its working. With each instinctive action she has fused a state of mind; to each instinctive action she has given a definite emotion of its own.

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[1] We could suppress the tendency to walk if we kept the baby off his feet for long enough. Like all other nervous and muscular powers which are not used, this power would lose force first, and then life.

[2] Cf. McDougall, *Social Psychology*, p. 63.

[3] Loveday and Green, *Introduction to Psychology*, p. 70.

We all know both mental pleasure and mental discomfort, and we can distinguish them. Every moment is coloured by the one or the other, and life has these two great tones of pleasure and of pain from the very first. One or the other is probably the first experience that breaks into the mysterious natal mind. Vague pleasantness or unpleasantness goes along with any random movement, and with any quiescent state. Perhaps some of the animals never get above this level of two tones of feeling. But the baby is born above it, or leaps above it almost immediately.[1] He distinguishes between one kind of pleasantness and another very soon, and begins to feel them so differently that they stand out as large, simple emotions. It is true that these emotions are simple and large; to adult emotions they are as two pure blues, washed straight off the cobalt, and the ultramarine, are to the infinitely tempered blues in Gainsborough's portrait of the 'Blue Boy'. So too, with unpleasantness and the emotions based upon it.

These large simple emotions are linked with the greater instinctive actions.[2] It is with these, upon the higher part of the scale of instincts, that our interest lies. For they give us the basis for all the emotional life we have. Every baby has a natural endowment of emotion, and no two are gifted in just the same way.[3] Babies show their emotions quite freely, and we can observe them. Darwin saw in his son, at four months old, the emotions of anger, fear, tenderness, and amusement or comic emotion, with their instinctive actions—crying, crying and starting, kissing and cuddling, laughing.[1] When children come to school at 5 years old, it is far more difficult to see anything purely instinctive in their behaviour. Yet sometimes an instinct takes a special turn, and is noticed as an oddity. The instinctive movements of flight are accompanied by the emotion of fear. It is aroused in some people by the touch of fur. Possibly, to primitive man, the touch of fur meant the touch of danger. Some of us may inherit more of this old sensory and emotional connexion than others. A little boy in a nursery school was asked to put away some toys, among which was a furry chicken.

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[1] See Extract 2.

[2] The simpler instincts have very little distinctive colouring of emotion

[3] See Extracts 8 and 10.

> 'He put out his hands, but as soon as he touched the fur, he withdrew them quickly, and showed evident signs of being frightened. He watched other children touch the chicken, and watched a friendly lady pick it up and kiss it. He told her it would bite; she assured him it would not, and it certainly did not bite her. There were woolly dogs and cats and rabbits, with which the child played quite naturally; he never seemed to think that they would bite. But in two or three days, with all encouragement, he could not be persuaded to touch the furry chicken.'

Possibly this was a case of true instinctive fear. It is hard to see such cases, because by 4 or 5 years old the children have already had a great deal of experience, and they have been taught that some things are naughty, and 'we must not give way to them'. Besides, two other influences are modifying pure instincts. The children are busily imitating other people; and also they have formed habits. It is hard for psychologists to decide exactly what the earliest most rudimentary human instinct-emotions are. Mr. MacDougall suggests the following list:[1]

| *Instinct.* | *Emotion.* |
|---|---|
| Flight. | Fear. |
| Repulsion. | Disgust. |
| Curiosity. | Wonder. |
| Pugnacious movements. | Anger. |
| Instinctive movements affecting self. | Emotions concerning self.[2] |
| Parental movements. | Tenderness. |

Besides these, he admits that each person has a group of tendencies which are less definitely expressed by particular movements. Among these he classes the sex instinct[3] and the herd instinct.[4]

Although it is hard for outsiders to detect instincts, instinctive emotions make a great impression on the little children who feel them. Most autobiographies begin in the same way—with one detached vivid scene; and this scene is usually connected with one of the great instinctive emotions.

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[1] After an inquiry which will be found in *Social Psychology*, chap. 2.

[2] See Section II. vi and vii.

[3] See Section II. vi and vii.

[4] See Section V. ii.

> 'Terrors are my earliest recollections—the speechless terrors of infancy, that could not be explained or alleviated—the wall-eyed, ghastly bust of Shakespeare in the lobby, that used to drive me into convulsions unaccountable to others; the train rushing over the bridge under which I was wheeled in my perambulator, and giving an impression of a procession of bodiless heads; the agonies of my first tubbings, which I took as malignantly intended, not feeling any need of them. . . . Fear I suppose is the strongest passion of which semi-animal infancy is capable.'[1]

Father Tyrrell is describing himself at about 2 years old. So vivid is the emotional life of little children. It is by emotion, pleasant or unpleasant, that little children are swayed hither and thither. Emotion of a pleasant kind is the one thing to which our first impulses guide us. So little children seek pleasure, and avoid pain. As yet, the idea of 'good' has hardly begun to interfere with their intentions. But sooner or later it does begin to do so. This does happen within the first year of life; and often a baby first meets with the idea of being good, in the very lowliest circumstances. At dressing and undressing and feeding times a little child soon learns what she ought to do. She knows what it means to be a 'good' baby. As she sits there she looks about, and stretches out her little hands to the table, curious and interested in the things on it. Her mother calls her by name, and tries to bring her back to attention; and this return to attention is perhaps the first moral effort asked of her. Regularly, at these times, this demand for effort is made, and if she makes it, she is called 'good', and she is very sensitive to this praise even when very little. This is the beginning of the training of emotion. That training is always of the same sort; it consists always in the connexion of pleasant emotion with one particular idea.

In this case the little child learns to control its instinctive movements of curiosity for a moment. In the same way older children learn not to run away, crying, when a train thunders past; they suppress the flight-fear instinct. To be suppressed is one of the commonest fates of an instinct. Others of our instincts are turned into habits, for instance, the habit of walking. And others suggest a conscious purpose to our minds. For instance, the curiosity-wonder instinct is often the determining factor of a life. At 13, Barbellion, who had wondered childishly and aimlessly at plants and animals, began to work with books, such as *Practical Trapping.* Then he read Darwin's *Origin of Species* ; then he struggled through the greatest difficulties to the profession of his choice—that of the zoologist.[1] An instinct which we adopt in this way works in us for years, and gives our purpose strength. To see what an instinct stands for in the life of a child needs close study, and an intimacy lasting for years.

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[1] Extract 9, and cf. also Extract 4.

### vi. *Language*

Children of 3 are beginning to talk, and it is at this stage that they often amuse older people so much. Every family relies on its babies to contribute funny stories to the family stock of jokes, which become venerable as the family grows up, but never cease to be retold and laughed over. The children of 7 and 8 years old have ceased to be so funny. They have become ordinary talkers, like the rest of us. The little ones are funny from ignorance, and because they are in the midst of the difficulties of learning to talk.

Utterance itself is the first thing to be mastered. The baby begins with the cry at birth, the cry which he can make because he has ready-made mechanisms in mouth, throat, tongue, and brain. He uses these mechanisms, and soon begins to make different noises or sounds. At ten weeks one baby 'begins to make noises', at twenty weeks 'she begins to talk to herself much more'. Then babies begin to 'coo' and 'gaga' and 'dadada'. Often they do so at about three months old. They are learning how to produce these sounds, and practising with tongue, lips, ears, and larynx, and doing so with delight. Some babies, however, do not do this at all. J. D. began to speak at sixteen months old, without any of these previous gurglings. One of his first words was 'gentleman'. Evidently in him, tongue, lips, larynx, and brain worked together very easily, by nature. But at sixteen months,

> 'before going to sleep at night, and immediately he awoke in the morning, his all-absorbing game . . . consisted in running over all the words he knew and ringing the changes on them. It is only now (at 4½) that his interest in this kind of activity is beginning to wane.'

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[1] See Extract 15.

Evidently his interest in making sounds awakened only with his power of using them as words. But some children seem to be interested in them as musical, rather than as intelligible, things. Robbie was between 2 and 3 years old, and hardly spoke at all. One day he and a lady were playing at ball, and the ball rolled away. The lady said with exaggerated emphasis, ‘ O Robbie, it’s gone under the sofa ! ’ Immediately Robbie echoed her speech, reproducing its time and tune exactly, but not separating any word from the next. The sentence had struck upon his ear as a musical whole. Children often have this fine appreciation of rhythm (though they lose it under our training). Each baby manages his speech practice for himself. Indeed, older people do not trouble themselves enough to see that children do make sounds clearly and well. Children sometimes mispronounce simply because they do not know exactly where to put the tongue or how to move the lips to produce exactly the right sound.[1] Such things can be taught. They ought to be taught while the child is still teaching himself to utter.

Language is much more than utterance, for in it a sound stands for a meaning to another person. The same sound must always stand for the same meaning. Such significant sounds are what we call words ; and a ‘ word ’ is necessary really for each meaning. Hardly any language can supply so many words ; but skilful people do pretty well. The really lucid talker is he who has a word for each of his many meanings. Dr. Johnson, the first talker of his day, was also the writer of the first English dictionary. But how do babies get towards Dr. Johnson’s level ? One little child only used one word, ‘ star ’, which he applied to everything bright. Another, at a year old, used only the word ‘ f’ower ’ (flower), which she applied to everything bright—a lamp, a hat, a yellow daisy, a piece of embroidery. Compare with these two children a little boy of three. Every Sunday, when he gets tired of his toys, he says, ‘ Ganpapa, tic tac ’. Then he must be shown each clock and each watch in the rooms. ‘ He goes all round the house, remembering every clock, and insisting on seeing inside it as he did the first time.’ This child has done a great deal more than little ‘ Star ’ and little ‘ F’ower ’. He can pick a clock out of its surroundings. He puts the marble dining-room clock, and the French drawing-room clock, and Grandpapa's watch, under the same name; and to do so means that he can see the essential likeness of three very different things, and utter a sound which labels this essential quality for other people. He has begun to take his experience to pieces and put the similar pieces into one pile. This is classification.

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[1] See W. Rippmann, *The Sounds of Spoken English* Dent’s Modern Language Series).

> 'A little child of 2½ calls all dogs "Oua-Oua", except his grandfather's dog Cambo. Although he cannot say this name, he does not class him with the ordinary Oua-Ouas. He also gives this name to all his wooden animals, the dog, goat, wolf, hyena, and lion. But when I called a stuffed lion "oua-oua", he seemed puzzled, and looked at me as though he thought I was mistaken.'[1]

This little child classifies, he is putting Cambo and the lion apart from the oua-ouas, for some reason of his own. He is so sure about the lion that he even refuses suggestion from the grown-up person. Moreover, he does this not when oua-ouas are there to be compared with the lion, but in their absence; evidently he can hold the idea of oua-oua before his mind, and hold on to that idea when he is attacked by other sights and suggestions from outside. One of Darwin's children called all watery things and all flying things 'Quack'. This sort of childish misuse of words often brings together things so incongruous that they make us laugh. One little child called caterpillars, pins, bits of fluff, paper, and other little things that happened to be found on the floor, 'pin'. The child made no mistake in classing these things together. They have a common quality—'Being-found-on-the-floor-ity'. But it is not the most important quality in any one of the little objects, and so it still awaits a proper name in adult language. Words, names, have been given by our predecessors to important things and important qualities. Those are not always the qualities which strike a child first. So the child takes time before it has learnt the words—the classifications—accepted by the adult world of his nation. But when classification first begins, the really important step has been taken. Even the two little children who used 'star' and 'f'ower' had already done this; they were doing the two things needed for language; they picked out a meaning—

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[1] Perez, *First Three Years of Childhood*, p. 261.

the quality of brightness—and labelled it, wherever they found it, with a sound. Had we known either of those children, we should have said, ‘ He ’s beginning to talk ! ’ But this stage is not really the first beginning. Behind it lies another stage, a stage which is hardly ever noticed. To understand this, we must go back to very early babyhood, and we must give up our own point of view. For to us the simplest thing we can think of is one simple object—bath, hat. Not so to a baby. (We cannot put into words thoughts as vague as a baby's, and when we put them into adult's words we give them a clearness which is not in the baby's mind.) To a baby the simplest thing is not any one object, but a whole, vague, complete experience. ‘ Having my bath ’ is simpler than ‘ bath ’. It is one experience—the warmth of the fire, light, a voice, body feelings, colours passing and changing, weight disappearing, the lapping touches of wetness and warmth. Little by little, as this mass of experience is repeated daily, the child recognizes it. He then begins to recognize certain parts of the affair—such as the wateriness of the bath—as the essential. At this stage, perhaps at ten months, he begins to notice another thing which comes, regularly, with this wet and exciting experience—a sound. One sound comes again and again—*Bath—bath*, uttered by various voices. And he recognizes it. Even earlier, he has recognized certain other sounds, such as the clink of the bottle and basin at feeding time. Now he recognizes the word, as a sign of the whole affair. And at last he himself utters the sound ‘ ba-ba ’, and means ‘ having his bath ’. It is true that he only utters this sound when the actual bath begins. It is true that this ‘ naming ’ includes really much more than ‘ bath ’ ought to include ; it is but a vague sprawling caricature of an adult's clear-cut word. Yet it is speech. Such words, so used, are sometimes called ‘ percept words ’, because they are used only in the presence of the experience. And at this stage the child must have the whole thing, and nothing but the thing. A baby who uses ‘ Mamee ’ rightly when his mother has her overall on, may not recognize her in her hat. But these mistakes are only temporary failures. From this time forward children go on splitting up the vast variety of experience into smaller parts, classifying them, and learning sounds with which to name these parts. Soon he begins to evoke by names things that are not there. As soon as he perceives likeness between the lamp that is there and a flower that is not, he is using a new mental power. He is now holding an absent thing in his mind's eye for consideration. The first stage of babyhood is left behind.

By 2 and 3 years children are doing this busily. All that they do afterwards is to make the process more perfect, especially in the following way. A certain Robbie hardly spoke at all at 3 years old. One day he was to walk to his grandparents' house, and had to put on his detested gaiters. When he was going home again, he ran to his grandmother, gaiters in hand, saying, 'Fam, fam'. She did not understand; so he went to the window, took hold of the middle of the blind, and tried to pull it aside. (His own nursery blinds parted in the middle.) As the blind would not move, he said to himself (with a rising intonation, as if surprised), 'Noo-o-o-!' He fumbled till the blind moved, and said, 'Fam! fam!' The pram was standing outside. His grandmother said, 'Are you to put your gaiters in the pram?' To which he replied, 'Um'. A year earlier Robbie had been reproducing sentences as musical wholes (p. 33), and he had made little progress in using words. But such incidents as this taught him how inconvenient it was to be so speechless. This motive it is which pushes children on, and they go from single words—'Bop!' (there is a boat) at fifteen months, to 'Letter Mamma Gappy lead' (Here is a letter from Mamma, Grandpapa read it) at eighteen months, and thence to 'I put them all in, I pour them out' (twenty-two months).

'Learning to talk' stands for the baby's first mental dealings with its world. That world is vague, miscellaneous, and indefinite to a degree which we have forgotten, and only recapture as we lie half awake, or in some curious moment of bewilderment. It is a 'big . . . buzzing confusion'[1], 'a vague, undivided whole'.[2] By the time a child is 7 or 8, the world is immensely clearer in his sight. 'The parts of the vague whole have become definite.'[2] The child can talk. His mind passes on to the more advanced questionings which older people recognize as thought.

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[1] Professor James.

[2] Professor Dewey, *How We Think*.

# SECTION II

## CHILDREN FROM 5 TO 7 YEARS

### TABLES SHOWING AVERAGE HEIGHT AND WEIGHT

ENGLISH GIRLS, 1883.

| *Age.* | *Average Height.* | *Average Weight.* |
|---|---|---|
| *years.* | *in.* | *lb.* |
| 3 | 36·05 | 31·9 |
| 4 | 38·13 | 35·5 |
| 5 | 40·82 | 39·6 |
| 6 | 42·63 | 42·4 |
| 7 | 44·45 | 46·7 |

ENGLISH GIRLS, County and Urban Areas, 1910

| | *England.* | | *Counties.* | | *Urban.* | |
|---|---|---|---|---|---|---|
| *Age.* | *Height.* | *Weight.* | *Height.* | *Weight.* | *Height.* | *Weight.* |
| *years.* | *in.* | *lb.* | *in.* | *lb.* | *in.* | *lb.* |
| 3 | 36·5 | 31·85 | 36·17 | 30 | 35·8 | 31·5 |
| 4 | 38·65 | 34·88 | 39·05 | 35·1 | 38·18 | 34·6 |
| 5 | 40·4 | 37·6 | 40·6 | 37·91 | 40·16 | 37·3 |
| 6 | 42·36 | 40·98 | 42·54 | 41·31 | 42·2 | 40·65 |
| 7 | 44·85 | 45·2 | 45·12 | 45·5 | 44·65 | 44·98 |

ENGLISH BOYS, 1883.

| *Age.* | *Average Height.* | *Average Weight.* |
|---|---|---|
| *years.* | *in.* | *lb.* |
| 3 | 36·82 | 34 |
| 4 | 38·46 | 37·3 |
| 5 | 41·03 | 39·9 |
| 6 | 44 | 44·4 |
| 7 | 45·97 | 49·7 |

ENGLISH BOYS, County and Urban Areas, 1910.

| | *England.* | | *Counties.* | | *Urban.* | |
|---|---|---|---|---|---|---|
| *Age.* | *Height.* | *Weight.* | *Height.* | *Weight.* | *Height.* | *Weight.* |
| *years.* | *in.* | *lb.* | *in.* | *lb.* | *in.* | *lb.* |
| 3 | 36·35 | 32·75 | 36·65 | 32·9 | 36 | 32·5 |
| 4 | 38·65 | 35·9 | 38·8 | 36·25 | 38·45 | 35·5 |
| 5 | 40·55 | 38·7 | 40·65 | 39·05 | 40·45 | 38·2 |
| 6 | 42·5 | 42·6 | 42·75 | 42·68 | 42·35 | 42·55 |
| 7 | 45·15 | 44·55 | 45·4 | 47·3 | 45 | 46·3 |

### i. *Development of Sight and Touch*

JANE, who is 3, chose some beads to play with, and asked me ‘ to start it ’. I threaded her bodkin, which was rather a fine one, and tied on the first bead, and Jane began to ‘ beadel ’.

The bead was a large one. Jane made various pokes at the hole with her arm held rather stiffly. She was frowning a little, and looking hard first at the end of the bodkin, and then at the hole. Both hands rose nearer and nearer to her face, and her head stooped forward, and her fingers clutched the bodkin quite tightly. But try as she would, she could not look at the bodkin, and at the hole, and hold the bodkin, and move it to the hole, all in one vision and movement. After a minute or two she put it on my knee and said, ‘ You finish it ’. Jane had two difficulties : (i) she could not see the hole and bodkin quite well ; (ii) she could not control the movement of the bodkin.

(i) To see, Jane has to do what M. had to do (pp. 8–16), but she has to do it far better. M. did not need to see very distinctly, but Jane does, if she is to pass the bodkin into the hole. She must accommodate the lens of either eye, to draw the rays exactly on one spot on the retina (pp. 8–9). Even if the work were 20 ft. away, Jane’s eye would have to accommodate its lens, though my own eye would not. At about 20 ft. of distance the normal full-grown lens and retina focus the rays without any alteration in the shape of the lens ; because the full-grown lens is at exactly the right distance from the full-grown retina. So, as we often see things about 20 ft. away, our lenses are often at rest. But a childish lens is never at rest. It is too close to the retina. At birth, all the front part of the eye is undeveloped (Diag. 8). It has to grow slightly more protruding year by year until the end of the seventh year.[1]

To see a thing which is *less* than 20 ft. off even an adult must accommodate his lens. Much more must a child. To see a thing that is very near, a child must accommodate extremely, and must exert the little ciliary muscles very vigorously. Children do bring little tiny things very near their eyes. They do so simply to get the largest possible image upon the retina. Incidentally, the ciliary muscles are compelled to make violent pressure on the lens. Jane has to accommodate her lenses thus violently. Not only that, but she has to alter the accommodation from second to second as she looks from the bodkin to the hole. For they are at unequal distances from her. All this is so tiring for the ciliary muscles that the focussing is not well done. Jane cannot quite see, and she feels rather uncomfortable.

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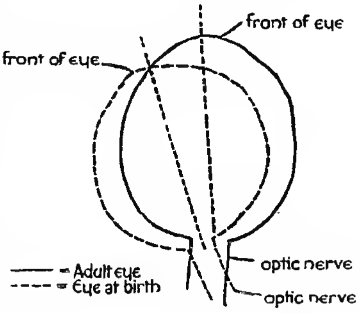
[1] Jane is 3, and her eye will be incomplete for some years yet. There is a difference of opinion as to the exact time of completion, whether 7 years or 10 years. It is certain that very important growth has been made by 7, but it is not certain whether some minute growth has not still to be made.

The muscles outside the eyeball (Diag. 2) are rather taxed. When the bead is straight in front, Jane converges her two eyes (pp. 8 and 15) with a strong pull of the inside straight muscle. Some of the energy wanders to her forehead muscles and she frowns. She moves her hands, and the bead and bodkin-point are nearer her right eye than her left, and so they must look downwards, obliquely, in unequal degrees. This movement needs a difficult combination of the muscles of each eyeball, and a difficult collaboration between the two eyes, so hard, that Jane is looking probably with apparatus not quite rightly adjusted.

DIAGRAM 8

To show relative proportion and placing of childish and adult eyeball



N.B. This is not in any sense a drawing or record, but a skeleton diagram

(ii) Jane handles the bodkin in a peculiar way. She holds it far more tightly than I should, and her little forefinger is bent at a sharp angle. Sir George Newsholme noticed this bent forefinger in little children who were trying to write. He says

> 'An infant learning to write with pen or pencil, in its efforts to concentrate muscle work, invariably bends the forefinger so that there is an acute angle in it. No infant scholar will learn to hold a pen in

any other way, for the physiological reason that it is the easiest way for him.'[1]

It is the only way of holding a small thing for which the machinery of nerve and muscle is ready. It is just because Jane is using these little finger muscles so strongly that she is holding her arm so stiffly. To thread beads she ought to use free movements; she ought to let the muscles of the arm and shoulder work easily. But this she cannot manage yet. She cannot yet send much energy to the little finger muscles, and keep an easy flow of energy coursing through the large muscles too. And she is making a great mistake in the guiding of her hand. She is looking at the point of her needle. But she ought to keep her eye on the hole,[2] and trust her fingers to the guidance of 'the area for feelings of movement' (see Diag. 5 *a*), and of the tactile area. It is they that guide our movements, and give us our idea and estimate of distance. But Jane has not made enough movements and judgements yet to be able to leave her bodkin unlooked at. She has not yet got the necessary infinitesimal tracks and links in her association areas. Her visual area, her tactile area, and her 'movement' area are not yet bound together with sufficient elaboration. These are the reasons why Jane frowns, and puts the beads away. What she does with real pleasure is to thread large pieces of newspaper, each pierced with a hole about $\frac{3}{8}$ in. across, with a large ivory bodkin about $\frac{1}{4}$ in. across.

Most children learn to read and write before they are seven, and in reading and writing every one of these difficulties appears again. In reading there are the following difficulties for the eye:

(1) For the retina: to get a large image (cf. p. 38).

(2) For lens and ciliary muscle: (*a*) to accommodate for a near view (cf. p. 39); (*b*) to change the accommodation from second to second, as the distance changes from the end of the line to the middle, and then to the farther end (cf. pp. 38–9).

(3) For the muscles outside the eyeball: to direct the two eyeballs obliquely to the left (in different degrees), then to converge in the centre line, then to direct the two eyeballs

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[1] Newsholme, *School Hygiene*, p. 91.

[2] In golf: 'Keep your eye on the ball'; at tennis, 'Keep your eye on the court'; in rowing, 'Keep your eyes in the boat'; 'Don't look at your hands'.

obliquely to the right (in different degrees), and then to swing downwards and to the left, to the next line. All this ought to be done in a series of even jerks, making the effect of one continuous movement (cf. p. 39).

In writing there are all these difficulties, and also the following ones:

(4) For the hand and arm muscles: (*a*) to hold a small tool; and to move it to definite points, at the same time[1] (cf. p. 40); (*b*) to hold and move a small tool, and to *press* it at the same time.

(5) For the arm and shoulder muscles: to prevent the writing from 'going uphill' at the end of a line.[2]

Thus, evidently the mechanical side of reading and writing is hard work,[3] and might be dangerous if it were not guarded carefully. So, too, is sewing, and any handwork done with small materials. Whether such work is a danger in our schools at this moment, we have two kinds of evidence to show. First, there are the Reports of the School Officers of Health. They all agree. They say that the commonest eye defect among school children is short sight. 'In the case of moderate short sight during later years (above 5), the children generally seem to have seen well when they were in the lower standards, and the history usually was that the defect had only been noticed comparatively recently.'[4] 'Acquired (short sight) does not begin until the eighth or ninth year, and becomes common after that age.'[5] This short sight, they say, 'is not decreasing as it should';[1] and they put its existence down to school work. Short sight is developed 'just at the time when one might expect school life to be beginning to tell on the child'. Their case against needlework is especially strengthened by such figures as these from London (1913):[2]

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[1] See Extract 9 for an illustration of the fallacy that all pens must be held in the same way.

[2] The arm is stretched out gradually to reach the end of the line. So its sweep gets longer and pushes the hand up the paper. To prevent this the arm and shoulder have to be pulled back, gradually and continuously (a difficult movement).

[3] If the writing is slanting, both the hand-work and the eye-work are more difficult than if it is upright. For one only straightens and then bends one's fingers to make an upright stroke. To make a slanting one, the easiest way is to keep the fingers almost still, and to use the arm freely. But little children cannot do this if they have to hold a pencil too (cf. pp. 39-40). They are forced to use a finger movement that is much more difficult. Slanting lines are harder to see than straight ones. Slanting writing lies more hidden by the pen and the hand than upright script; and so the child cranes forward to see what the pen is doing. With that, his whole posture goes wrong.

[4] Report of Chief Medical Officer (Board of Education), 1913, p. 52.

[5] Ibid.

| | |
|---|---|
| Age group, 8–9 years. | 4·5 % more boys than girls with normal sight. |
| „ 12 „ | 7·3 % „ „ „ |

For the doctors explain short sight as follows. In the short-sighted eye the lens is too far from the retina to bend the rays on to the retina. And many doctors say that strong pulling and working of the muscles of the eye stretches the eyeball, and actually makes it too long from lens to retina.[3] Such mischief does not declare itself at once. It may begin at 5½, and be noticed first at 7.

The other evidence comes from the children. We still see children using unsuitable pens and needles and pins and slates and paper. We see the signs of strain—and how familiar they are! This child lifts up her book, close to her eyes—(the print is too small)—and frowns. That boy has dropped his head almost on to the desk, and his dirty little finger is bent upon the penholder with all his might, and he is almost squinting as he fixes his eyes upon the nib. Jane could put her play away, but the writing lesson must go on to the end of the half-hour. In this silent way the children bear out the evidence given by the doctors. Clearly, for little children there must be special reading books and special writing materials. Many teachers are exemplary in their care, but a few still hardly know what the children need. Clearly the main points as to reading books are size of print,[4] and visibility. In 1913 the British Association published a Report which prescribes definite sizes of print as suitable to certain ages. These recommendations are summed up in this Table:

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[1] Report of Chief Medical Officer (Board of Education), 1915, p. 34.

[2] Ibid., 1913, p. 52.

[3] There are a few cases of bad short sight in children under 5. Such cases are probably congenital. (Under 7, there is only about 0·5 per cent. —1 case in 200.)

[4] This will decide the distance at which the child holds the book.

STANDARD TYPOGRAPHICAL TABLE.

| *Age.* | *Minimum height of short letters.* | *Minimum space between lines.* | *Maximum length of line.* |
|---|---|---|---|
| *years.* | *mm.*[1] | *mm.* | *mm.* |
| under 7 | 3·5 | 6·5 | — |
| 7 to 8 | 2·5 | 4 | 100 |
| 8 to 9 | 2 | 2·9 | 93 |
| 9 to 12 | 1·8 | 2·4 | 93 |
| over 12 | 1·58 or $\frac{1}{16}$ in. | 2·2 | 93 |

The main points as to writing are the type of letter, the size, the size of the implement, and its kind, the use of lines. In 1886 Dr. Kohn advised that upright handwriting should be taught, and one authority after another has advised as he did. Some schools now teach the upright 'script' type of writing, which has no oblique lines. It can be written very quickly, and it seems to me to have every advantage. As to the size of the letters, the best rule seems to be, at first, let the letters be any size. The child will gradually make them smaller, as the motor and nervous mechanisms grow. Children trained on Montessori work have no difficulty in writing, because the motor mechanisms have been grown gradually, as the child has felt round sandpaper letters again and again. As to the size of implements, Dr. Shaw suggests that a child should use crayons or chalk for a year, at about 6 years old.[2] The chalks should measure $\frac{3}{8}$ in. across, and be very soft; the writing board or paper should be really rough. Then the difficulty of holding and pressing at the same time will be lessened. Next year let the child use a large pencil, and later, pen and ink. As to the use of lines, let the children write without lines at first, and later with a single line.

Once, in a rage, Dr. Kohn wrote, 'Reading and writing lessons ought to be forbidden in the infant school'. Even when one is not in a rage, one believes strongly that reading and writing should be begun as lessons only when the children are about 6½ years old.

## ii. *Imaging and Imagination*

The years up to 7 are sometimes called the age of make-believe. Make-believe simply means pretending.

'And here I wish I could tell you half the things Alice used to say, beginning with her favourite phrase, 'Let's pretend ". She had had quite a long argument with her sister, . . . all because Alice had begun with "Let's pretend we're kings and queens"; and her sister, who liked being very exact, had argued that they couldn't, because there were only two of them, and Alice had been reduced at last to say, "Well, *you* can be one of them, then, and *I*'ll be all the rest".'[1]

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[1] 100 millimetres = 4 in.

[2] E. Shaw, *School Hygiene.*

Alice was then 7½.

At 5 and 6, a leaf makes a cup, a little sand a pudding, a place behind the sofa a camp.

> 'At evening when the lamp is lit
> Around the fire my parents sit;
> They sit at home and talk and sing,
> And do not play at anything.
>
> Now with my little gun I crawl
> All in the dark along the wall,
> And follow round the Forest Track
> Away behind the sofa back.
>
> There in the night where none can spy
> All in my hunter's Camp I lie,
> And play at Books that I have read
> Till it is time to go to bed.'

This is exactly what 6 years old does, though he may play what he has seen and heard, not what he has read. Nothing strikes an older looker-on so much as this perpetual pretending. For we could not do it. To us, pretence is empty; it is not real. On this point children's minds do really differ from adults' minds.

There is one main reason for this difference.

To us grown-ups, it is the real world which is bright and vivid and solid; the imaginary world is pale, fragmentary, and wavering like mist. To a child, it is the 'real' world which is very fragmentary, very incomprehensible; and the imaginary world which is very vivid, very visible. At about 7 years old, Thomas de Quincey

> 'lived for ever under the terror of two wars in two separate worlds, one in a real world, . . . the other in a world purely aerial. Yet . . . for anxiety and distress of mind, the reality was as nothing . . . compared to that dream Kingdom.'[2]

Often a child does not know whether a thing which he remembers happened in the one world or in the other. This condition can be explained. One of its causes is that there is a real difference between childish imaging and adult imaging. What is imaging ?

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[1] *Through the Looking Glass*, p. 8. Cf. Extract No. 11.

[2] *Autobiography*. For the account of the real war with the factory boys, and the imaginary war, see Extract No. 10.

Notice what happens if you see the words, ' a bird '. Some shape like a shadowy bird flits before your mind's eye. Vague or precise it may be, but it is there. This shape is called an image, and because it is an image *seen,* it is called a visual image. Instead of this you may hear, however faintly, upon your inward ear, the single call of a bird. This, too, is an image, an image of hearing, an ' auditory image '.

Thus you can see the sights, hear the sounds, taste the tastes, touch the textures, make the gestures, that you have known in the past.

> ' For oft when on my couch I lie
>    In vacant or in pensive mood,
> They flash upon that inward eye
>    Which is the bliss of Solitude ;
> And then my heart with pleasure fills
> And dances with the Daffodils.'

You can revive within you the feeling of a past sense experience, in the absence of the outside stimulus. Sensory areas of the brain[1] have been excited before, and you can excite them again, from within, and so reproduce the original feeling.[2] An image can be so vivid even in an adult mind that the person mistakes it for reality. A girl was nearly run over in the street. The policeman who saved her said to her, ' You must be careful, miss, or you'll kill yourself.' These words struck upon her ear when she was terrified. The last words, ' You'll kill yourself ', repeated themselves perpetually. She heard them. She mistook them for the sentence passed upon her by a fiend. They were of course really very vivid auditory images. With adults vividness such as this is usually caused by ill health of mind or body. An instance will be found in Poe's tale, ' Berenice '.[3]

A measure of vividness approaching this belongs to little children's images often and normally. Their images are drawn from the comparatively few things that they know so intimately. Our images have been weakened and dulled by the many things of each kind that we have seen and known fleetingly. Compare your own childish image of 'fields' or 'backyard' with your present one. To a child, 'a big, big armchair' becomes at once his father's big wooden armchair with the red cushion on it.[1] When we ask a child to draw after a story in school, he shows us how much imagery he draws from his own home.

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[1] See Section I.

[2] Most people (but not all) use visual images most frequently, but have some touch, taste, auditory, tactile, and motor imagery.

[3] See also Extract No. *7*.

As his images are so brilliant, they command the child's whole interest and attention ; being drawn from things which he has himself experienced, they revive the emotion he has felt in the past. Thus they have great power over him.

There is evidently a connexion between the words *imagery* and *imagination.* They both come from the same root. Is there any connexion between the two powers ?

There was once a man who could close his eyes and repeat whole pages of a book he had read but once. He 'saw' the page reproduced exactly before his inward eye. But he could not skip from one passage to another and back, in his mind. He could only reproduce the original sense experience exactly as it had been. He had visual imagery in the highest degree. But of imagination he had not any.

What is imagination ? Where shall we find it ? In poetry, certainly.

I

'Up the airy mountain,
Down the rushy glen,
We daren't go a-hunting
For fear of little men,
Wee folk, good folk,
Trooping all together,
Green jacket, red cap, and white owl's feather.

II

Down along the rocky shore,
Some make their home.
They live on crispy pancakes
Of yellow tide foam :
Some in the reeds of the black mountain lake
With frogs for their watch dogs
All night awake.'

I can read the first four lines without using anything but imagery drawn from sights I have actually seen. We come to line 4, ‘ little men ’. I can imagine pictures I have seen of dwarfs or African pigmies ; but they will not do. I image a whimsical face, on a wiry body, and I make them appear tiny to my mind’s eye ; I multiply them, and let them ‘ troop ’, as I have seen children ‘ troop ’ into school. ‘ Green jacket, red cap, and white owl’s feather.’ Green jacket ; a Norfolk jacket ? a khaki jacket ? No ; but something like the image of a picture of Robin Hood. Red cap? Not a tam-o’-shanter, nor a soft flat cap ; a cap like Dick Whittington’s, but red. I *image* Whittington’s cap, as I have seen it in a picture ; then I *imagine* it red, and imagine it on to the head of my little creature. The white owl’s feather recalls the image of a white hen’s feather I have seen. I do not take the trouble either to ascertain or to imagine the markings of an owl’s feather ; I simply imagine a vague white feather on to the cap.

---

[1] Cf. *David Copperfield*, chap. 1.

The second verse makes a demand upon powers of imagery and imagination almost exactly equal to the first.

To imagine, you must have images ; to imagine, you must have knowledge ; to imagine well, you must pick and choose such images as are suitable to your main idea. The main idea here is the trickish, slightly malicious character of these mock-human fairies—dressed like men, eating like men, guarded by dogs like men, and yet so unhuman. For this reason a tunic seems to me to be right, and a uniform jacket wrong. The latter belongs too definitely to men who are very human and not specially whimsical and airy. The tunic is sufficiently known to me to suggest men, and sufficiently unreal to me to let its wearers be strange, powerful, and as odd and fantastic as they will. In a uniform you must march with an army step, in a tunic you can frisk and trip. What, then, is imagination ? To imagine is to use our old images to build up new wholes.

I have before me a collection of ‘ imaginary drawings ’ by children between 3 and 13. Such drawings are often used as evidence for all sorts of causes ; and often no evidence is treated more wrongly. To guard against misinterpreting it, we must remember

(1) That drawing reveals imagination of a *visual* kind only.

(2) That drawing reveals only what the drawing does actually show. What the child sets down on paper, that has been in his mind.

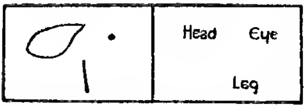
(3) That drawing does not show all that the child imagined. Often the beauty of his imaginings and the strength of his feeling is too great for him. Once a little boy was scolded because he did not set to work on his ‘ expression drawing ’. ‘ I can’t ’, he replied ; ‘ it ’s all inside me ’.

Again, much of the imagery may be beyond his power of drawing.

The drawings now before me give me some hints as to the children’s imagery, and they have certain other characteristics which occur over and over again in similar work.

Mary ($2\frac{1}{2}$ years) painted lines going in all directions. Afterwards she called them rabbits and aeroplanes, because she had heard the other children say similar things. The first real drawing is a bird, by Jim ($3\frac{1}{4}$ years) (Diag. 9). The second is a picture of ‘ The Three Bears ’, by Herbert (4 years). At the top of the paper are three bears in a row. Each bear has a long boat-shaped body, a round head, with features and ears, two legs (seen in profile), each with a trouser on. Below were five more bears, repetitions of the same pattern, getting scamped towards the end. Fred (5 years) drew three bears only, and some windows above their heads. Next comes a group of ten drawings by six-year-olds. They illustrate the Russian tale, ‘The Cat, the Cock, and the Fox ’. Each drawing represents all the people in the story. But in each drawing, the cat, the fox, the cock, and the farmer are scattered over the paper, like pictures in a catalogue, without connexion or design. One child gives the cat a blue bow, another gives the farmer a top hat, another colours the cock in his natural colours. There are eight drawings of the same story made by children between 10 and 13 ; each one shows a complete scene—for instance, the fox approaching the house through the forest. All the eight pictures are very much alike. The houses and the fir-trees are very conventional. I cannot see any great taste, or variety in these eight pictures.

DIAGRAM 9



These pictures show us some traces of imagery. The child whose farmer wears a top hat is a child whose father is a farmer, and wears a top hat at funerals. As far as I know, it is then and only then that he does so ; perhaps the top hat to the child is part of a scene of unparalleled importance.

This is imagery ; to use the image in a new way is imagination. When Herbert drew the bear's trousers he may have been recalling, and trying to copy, a picture in his picture-book. If so, he was merely using imagery. He may have been combining the trousers, so important a part of his own gear, with the idea of his Teddy Bear. If so, he was using his imagery with imagination. It is very interesting to trace children's imagery to its source.

Neglecting all other points, notice this one. Mary ' draws ' simply for sense pleasure. She loves the feeling of making lines—the slight vibration of soft chalk on rough paper, and the pleasant feeling of moving muscles, and the sight of the result, and of the brush, and the dropping water. Jim is trying to reproduce something which he sees in his mind as a whole creature ; but he cannot keep it before his mind as a whole. Now one part, now another appears. Herbert can keep his mind steadily on the bear as a whole. But as he draws it, the sense pleasure of moving, and the mental pleasure of making a bear, banish all idea of the story. Fred does aim at a scene, and in this he is rather advanced. The six-year-olds are less advanced in this respect.[1] They do not grip it as a whole, though each personage is a whole which each child can reproduce. Of course the ten-year-old child can draw ' a proper picture '. He can conceive it, and work from it, and return to the idea of it, and work from it again. He enjoys both pleasures, that of making lines and patches, and that of building a new scene with old images. Wherever a mind is doing this, that mind is using imagination. Coleridge was doing this when he wrote *The Ancient Mariner*. The carpenter is doing it when he estimates wood for a new cupboard. People may deny this ; yet it is true. Some people think that to ' use imagination ' means necessarily the creation of a book or a picture, and that its use belongs only to writers, dreamers, and revolutionaries. A mother says, as she watches her little child ' make a puff-puff ' out of bricks, ' What things they do imagine ! I did, when I was a child, but I don't now.' But that very woman plans out new enterprises daily. She invents new clothes, new dinners, new work, new amusements. She sees the dinner as a whole in her mind, and, working to that plan in her head, dishes it up to the table. She is working under the guidance of imagination. There is a practical imagination, as well as a purely beauty-making imagination.

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[1] Six-year-old children usually attempt to draw a scene. In this they vary as in everything else.

The difference is not that children imagine and grown-ups do not. It is that young children imagine indiscriminately, and we imagine under the clear guidance of an idea. It is the growth of this power to work to an idea that we see in a series of drawings.

### iii. *Play*

Here is a little child, a year and eleven months old, at play by himself in a room full of children. The baby has a ball and walks about, then throws the ball aimlessly and goes after it. He does this over and over again, and this play goes on for quite a long time. Now he leaves the ball and goes to a box of bricks. He takes the bricks out of the box, and puts them in again, dropping them in. This game again goes on for some time, until another child leaves some doll's cups and saucers on a table near by. The baby goes to them. He leaves the cups alone and plays with the saucers. He puts one saucer on the top of another and another on the top of that and piles them all up. He takes no notice of all that is going on around him. His little face has a serious, occupied expression. He appears to be listening to the noise the saucers make as he piles them up. He carries on this game for a long time, quite happy and alone among the busy active children in the nursery.

Jacky, 3 years old, comes mooning along, with a basket on his arm, calling out 'Potatoes, potatoes'. He passes me, and I buy some. He gives me some invisible potatoes and puts his hand with the invisible money into his pocket. Then he covers the basket with an invisible cover again. He goes rambling on, calling 'Potatoes' for a long time. No one takes any notice of him or any part in the game. This does not really seem to matter. At last Jacky drops this game and takes up a furry animal that can run on wheels with a squeak. He studies the wheels and remarks: 'This one 's broken—that one 's not', and goes wandering off with it.

He pulls it about for a long time, and then comes back to me, and shows me the wheels, and says : ' This one 's broken, that one isn't '. After this he gets the doll's saucers out of the cupboard, and takes them to the doll's perambulator, but leaves the perambulator, and goes to the table, and spends a long, long time piling and unpiling them. This intense occupation with them only ends when the other children carry out the grand last act of the Cow Game.

As for Nelly, who is a little over three, she spends all her time wheeling the doll's perambulator about, in and out, among the others.

These little ones are all in the background. The two who fly across the front of the stage, and return and figure there, are Horace and Jenny ; Horace who is four, and Jenny who is a little younger.

Horace began with a furry toy. He banged it on the fireguard and found that it squeaked. Again and again he banged it and it squeaked. Meantime Jenny was wheeling the perambulator. She became the potato man and went about calling ' Potatoes '. Horace copied her and called ' Potatoes ' for a moment, until the two games ended in a runabout chase game. Then Horace went about, again calling out ' Any potatoes ? ' but soon stopped, took up a brick, aimed it at a particular panel of the door and shied. He did this again and again, with great pleasure. Meantime Jenny had thrown herself on the floor, and was flopping about with arms and legs ; she was being ' a fish swimming about in the water '. Talking to an old friend afterwards about fish, she said she had got the idea of swimming ' from Charlie Chaplin on the pictures '. Horace came, and was a fish too, and they flopped about over and over again. Horace went back to the squeaking toy for a little, and then he and Jenny went rolling and scrambling about together. This vague game developed into shoeing horses. But soon Jenny was lying on the floor, while Horace bent over her to do some operation on her. ' She 's a cow ', the other children told one another. She was a dead cow being cut up. All the other children, except the baby, were drawn in. Even Jacky and Nelly went to look on, Jacky to run in, sit down on Jenny, and slide down her. To do so was all wrong ; it did not follow the idea of the game. But Jacky did not understand the game.

Nor did I. All the other children were quite grave, and began to drag all the chairs in the room to Jenny. It took some time to do so, but all the children seemed to be deeply interested. The chairs were arranged around Jenny like a fence, and then the game ended in a triumph. The children talked about this game afterwards ; they said the cow was dead, and they had ' put it in the bury hole '.

What is the difference between the play of the baby and the play of the four-year-old ? The baby throws aimlessly ; he piles and unpiles. In this, his pleasure is the simple pleasure of the senses ; the feeling of moving muscles, the sight of the bouncing ball. This simple pleasure can be got any number of times by repetition.[1] Among babies, play begins as the following of sense pleasure from minute to minute. The value of this play is both physical and mental. Piling and unpiling needs very exact measurement of muscular force and fair judgement of distance. The baby is making new connexions between his visual area and the area for feeling of movement. He is making his new nervous mechanisms ; he is learning to move as he wants to move. Mentally he is learning to follow his own path, to do the thing he has in mind and leave everything else aside. Here begins that choice of actions which later we call character.

Now Horace plays a game rather like the baby's, when he throws a brick at the door. He wants the pleasant adjustments of eye and muscle. But two things differentiate his game from the baby's. First, he wants a more delicate and difficult bodily adjustment than the simple one needed to throw aimlessly, and so he restricts himself, and says he must hit a particular panel. Secondly, because he has an aim, he gets a richer feeling when he hits it. He feels like the King of all Brickthrowers, ' as glorious as George-a-Green '.

Horace and Jenny play together in a different way. Each has a vivid picture in mind, and both wish to do it in action together. The pleasure of the cow game is not only immediate pleasure of the senses. It is the very delightful fantasy of being the cow, or one of the buriers. Horace and Jenny show an increasing power of creating a new idea, of keeping it in mind as a whole, and of working towards it. Jenny can even keep quite still while being 'cut up'. She acts consistently on the plan required by her whole idea. The value of the play consists in this. And also in this: Jenny has been outside herself, and into somebody else. Wild as her fish is, she is nearer to fishes and cows now than before. For she has identified herself with a fish and with a cow.

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[1] Rhythmic games like the mulberry bush give this sort of pleasure ; cf. p. 29.

These games are typical of play at 5 to 7 years. Let us compare them with play at 9 years old. A little girl, Alice, had a present—a long, heavy box.

> 'The first thing I saw was a washing tub; a real little washing tub that would hold water without letting it run through at all; just exactly like what our servant washed the clothes in, only a great deal smaller. It was big enough to hold all my doll's clothes though! It was the very thing I had been wanting ever so long, for I had had to wash all my children's things in a basin in the nursery, the same basin that I washed my hands in, and it didn't seem real at all. Now I should do them quite like a proper servant. I could stand in front of my tub, and have a real grown-up wash every day of my life, now, just like our great fat cook in the back kitchen, and wasn't that grand? I should rather think it was . . .
>
> You may be sure I woke early enough next morning, and ran across the garden, and through the hole in the hedge to Lucy Walters, who lived next door, and told her the glorious news about the tub, and that she was to collect all the doll's things, and we would have a regular washing day.
>
> There were the morning lessons, to be sure. Tiresome old morning lessons! But Aunt Mary said that real people were obliged to put their things in to steep the night before, and she said that we might have a quarter of an hour's grace to put ours in to steep too, and then we could pretend that lesson time was night, and when 12 o'clock came, it should be morning, and we would set to work.
>
> At last 12 o'clock came, and then didn't we set to work? We got ever so much dirt off the things, and we put some blue into fresh water, and washed them again. Then we made some starch, . . . and then we pegged out our things on the line, and sat down to watch them dry. We had made ourselves quite tired, and the skin on our finger ends was all coggled up into wrinkles, just as cook's fingers used to be when she had had a hard day's wash. That pleased us very much, and we were almost sorry when the wrinkles went away. I do think that wash was the best fun I ever had in all my life.[1]'

A note rings through this that cannot be missed: real life, real tub, real water, real washing days, wrinkles just like cook's. How Alice differs from Horace and Jenny![2] Her means must be the exact, proper means to produce her end in view. She gives her heart to this; and though she still uses 'pretending', and pretends to have a position in the world like cook's, yet she would not be happy at all had she to pretend water, clothes, and wrinkles.

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[1] *Nine Years Old* (Macmillans, 1889).

[2] Cf. also Extract No. 7.

### iv. *Emotion of Self*

Among our earliest recollections there are always some memories of other people.

A man of 40 spoke of the things he recalled about his earliest childhood. He said that he remembered being punished for 'frailties of nature' with 'slappings and scoldings . . . which seemed ruthless and incalculable outbreaks of hostility on the part of normally friendly powers'. As a little child he could not understand the strange conduct of grown-up people. No little child can. A child studies older people, he knows very well what they will do on a given occasion, but the more he studies them, the better he knows how different they are from himself. He sees 'men as trees, walking'.

Harriett Martineau wrote about her childhood:

> 'It now appears to me that I had scarcely any respite from terror. My fear of persons was as great as any other. To the best of my belief, the first person I was ever not afraid of was Aunt Kentish . . . when I was 16.'

Poor Miss Martineau! A child soon feels that these vague surrounding creatures affect him. Sometimes they do this in simple ways. They lift him, or feed him, or take away a toy, or give him a cuddle, or frown or scold, or laugh and sing. They arouse in the child all the simple instinctive emotions (see p. 28). In fact, they give him his keenest pleasures and pains.

But people affect him in another way, more vague and subtle. They have a curious power over him. Their behaviour towards him may give him a *peculiar* pleasure, or a *peculiar* unhappiness. This, too, is curious about these feelings: that they are not caused by any direct bodily feeling, like the sting of a slap, or the taste of cake. No blow need be struck, no kiss given, to excite this pain or this pleasure. They awake at a word or a look. Of all our native instinctive emotions, these two instinctive trends are the least bound up with any one definite bodily experience. But they seem to be native in us, and they seem to show themselves in certain definite bodily expressions. One is the emotion and instinct of self-assertion or elation, the other is the emotion and instinct of self-abasement. And these two emotions are the most fundamentally important in our lives.

The feeling of elation, full of power and gloriousness, is a familiar feeling.

> 'I celebrated my fourth, my first conscious birthday; and though I did not know what it meant, I understood it was something to be proud of. . . Before this, I discerned clearly . . . between praise-provoking and anger-provoking acts.[1]'

Before any dawning judgement of right and wrong, this child loved to feel praise drop softly upon him; he felt the secret swell of elation when he was the family hero on his birthday. On the other hand, when Lord Byron was about 4, he heard a nurse say to his nurse,

> 'What a pretty boy Byron is! What a pity he has such a leg!' On hearing this allusion to his infirmity, the child's eyes flashed with anger, and striking at her with a little whip . . . he exclaimed impatiently, 'Dinna speak of it!'[2]

The stranger made him feel that there was something in him which other people despised. Bitter to him, even at 4, was his deformity, 'with the head statuaries loved to copy, and the foot the beggars in the street mocked at'. Intolerably often, he felt the emotion of self-abasement;[3] to regain some elation, he burst out in anger and tried to beat the stranger. Later in life he tried other and less successful ways. In the early years of life the two emotions of self show themselves very clearly. And they act very directly upon conduct. Little children seek pleasure, and only pleasure, as their guide (see p. 31). And, of this pair, the emotion they seek naturally is elation. This fact explains curious, difficult cases, like the following one: L.[4] is an ordinary, healthy little girl, nearly 6 years old. Her face is fresh and bright, but her expression is often unpleasant—set and yet uncontrolled, with eyebrows drawn together, and mouth hanging open. Sometimes she has a sullen, worried, old expression, like a child of the very poor. She is a very naughty unpleasant child. She is not ill, or exceptional. Sometimes she is quite good. She is an ordinary child.

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[1] G. Tyrrell, *Autobiography*. See Extract 9.

[2] Moore, *Life of Lord Byron* (1853), p. 8.

[3] Extract 10 and Extract 4.

[4] Compare Extract 4 with the case of L. throughout.

Now when L. is told to do something—‘ No, I won’t ! No, I won’t ! ’ To any assertion she says, ‘ No, it’s not ’, and looks up rather affectedly and rather impudently. It is not that she does not want to do the thing she is told to do ; she would often do the thing commanded with pleasure ; it is at the mere command she jibs. She has one or two other curious traits. One is her attitude to B., her brother, 7 years old. She thinks about him a great deal. While dressing she pours out confidences about him : ‘ B. doesn’t clean his teeth.’ ‘ B. doesn’t wash himself. Nurse has to wash him, and then he is quite good.’ ‘ B. doesn’t do *this* for himself.’ All these remarks have an indirect reference to herself. She is always comparing herself and others, especially if any stress is laid upon her age. ‘ L., I went to a place to-day where your aunt and I used to go when we were *very* little—younger than you ! ’ L. : ‘ I’m 8 ! ’ ‘ Well, your aunt was 5.’ ‘ And how old were you ? ’ ‘ Twelve.’ L. (quickly) : ‘ And I’m 21.’ Lastly, L. has some curious ideas about boys and girls. Some one spoke about a new baby, and said, ‘ Is it a boy or a girl ? ’ L. said, ‘ It’s a little boy ’. ‘ No, it can’t be ; they call it Janet.’ L. : ‘ No, it isn’t ; it’s a little boy.’ ‘ No, no, it’s a girl.’ L. : ‘ No, they put them into little girl’s clothes, but it’s a boy.’ When she was nearly 3, L. had cut her hair off. Then she had been called ‘ a little boy ’, and she had been made fun of. Perhaps she had some doubts about her own sex.

L.’s three peculiarities were disobedience, comparison of herself with others, possible doubts about sex. We might not think that the three were connected. But in truth I believe they go back to the same cause. Each is an attempt to get back her lost self-elation. L. had heard herself called ‘naughty’ many, many times before she was 2, and she had felt blame. She did not win much appreciation to set against this abasement. So her desire for pleasant emotion had to work in a roundabout way, and, like Byron, she got elation by anger and defiance. She compared herself uneasily with other people, and always bested them in imagination, as another means of getting elation. She wants to be a boy, because she rather suspects that a girl is somehow inferior. It is only by being naughty and disagreeable in these ways that she can get the pleasant emotion about herself ; and emotion about herself is the most intimate and sensitive of all her feelings.

Her surroundings are making ‘ a bad temper ’ out of anger and wounded ‘ self ’-feeling.

Some children have a far stronger streak of self-abasement than of self-assertion in their nature. Such a child was Thomas De Quincey, afterwards famous as the opium eater. In his early childhood he could not wring much approval from the evangelical severity of his mother. His emotion of elation was starved, just as L.'s was. But the effect was the contrary one. Thomas De Quincey withdrew, as it were, from this world ; he found his elation in the regions of imagination. As far as the real world was concerned, he grew to feel that a debased and oppressed position was the right one to be in. Thus his attitude to the world was deformed in the earliest years of his life, while he appeared a most obedient child.

To feel these emotions of self is one of the earliest of emotional states. (To *know yourself* is one of the most advanced of intellectual states. But to begin to learn about yourself is the inevitable result of life, however short. Little children have so much to learn ; they do not know what their own selves seem to be like from the outside, and they are very far indeed from suspecting that other people have feelings inside them just like their own. They do not even know that other little children have them. However, they find out about these things, daily and hourly, in unnoticed passages of ordinary life. Nothing can be more ordinary than the following incident. Oliver (3½ years) was looking at a picture book. Rose (nearly 3) seized it. Oliver held fast, and Rose burst into angry screams. Her mother said : ‘ Rose, that's Oliver's book. Leave it alone.’ Rose retreated, looking rather currish. She had learnt more than one thing. Dimly (as she learns many things), she learnt that ‘ Rose ’ was naughty. *She* is Rose ; and what she does is called Rose, or Rose's. This identification of herself and her deeds is very puzzling. Often she herself looks at her deeds with a detached air, as though the deed, being done, had quite parted company with her. But now she is learning from her mother that Rose's self and Rose's deeds are one, and how both look from the outside.[1] Secondly, she is learning that Oliver wants the book just as much as she does, and just as she does. It is very important that she should learn this. If her mother did not teach her, she would take a long time to find it out for herself, because most of her knowledge about herself is quite unlike any knowledge she can have about other people. She knows her own bodily feelings. She knows her own little thoughts, her feelings, and vague background of mind and body. These things are known only to her, and she cannot ever know them about another. She knows the look of her own legs and arms, and the sound of her own voice, and it is only these things in herself that she can really compare with similar things in others. How is she to learn that others have thoughts and emotions like hers ? By the long road of thoughtful experience, or the short road of her mother's teaching.

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[1] Cf. Poe's story, *William Wilson* ; also G. B. Shaw, *Pygmalion*, Act V ; Shakespeare, *The Taming of the Shrew*.

### v. *Emotion of Sex*

As we have seen (p. 56), little L. has some curious ideas about babies. So, too, has her brother. At 7¼ he believes that when a new baby comes, ' if they let its hair grow, it will be a little girl, but if they cut it off, it will be a boy ! ' Both children had thought about these things. Very possibly both were still wondering, ' What is really the difference between a boy and a girl ? Which had I better be ? *Which am I ?* ' So much evidence has been collected that we cannot deny nowadays that children often wonder about human life, and its instrument, sex. They do so when they are quite little ; indeed, often they do so before 4 or 5 years old. And, could we but see the world with clear eyes, what could be more natural ? If we could wipe away our experience and keep our intelligence, we too should notice that the world is inhabited by people of two different sorts. Then it becomes important to know which sort is best to be, and whether you can change from one to another. We should also notice that new people appear as babies. Where do they come from ? One soon begins to think that a child who does not notice such wonderful differences must be blind. (But perhaps the reason why more children do not ask openly, or even think questions to themselves secretly, is that even when very, very young, they feel it would be considered naughty. It is impossible to exaggerate the sensitiveness with which little children feel *what they must not say.* And sometimes they rule such questions out of their minds with ruthlessness. Yet a child does sometimes say, ‘ I should like to be there, when the sheep makes a little lamb ’, or asks, ‘ Where did auntie get the baby from ? ’ Then the mother has three choices. She may say : (i) You mustn't talk about such things. (ii) The doctor brought it. (iii) ‘ Listen . . .’, and tell him the truth.

(i) This answer is made to a question which is innocent, and which is a real question in the child's mind. Why stamp it with a character of evil ? If you do so, you may stain the child's whole feeling towards babies, and later towards marriage, with shades of wrongdoing. You cannot tell what harm you may do. This warning is not exaggerated.

(ii) This answer is a lie. It deliberately misleads the child and hides the truth, and by so doing helps the child to accept explanations which are not explanations, and this is the most fatal mental habit.

(iii) The truth is not too difficult for the child to understand. The analogies of plant and animal life—the hen laying an egg, the seed lying in the ground [1]—ought to be quite familiar to little children. We ought to see that they come across these things. To watch plants and to have pets is part of little children's business.[2] Then children know something of the main outlines of life so early, that later they hardly recall a time when they did not know ; and this it is which is so important. The kindly analogies of plant and animal life are not shocking or alarming to the *little* child. Learnt early, the truth has time to sink back, and become part of the accepted, half-forgotten, unquestioned background. Let a little child learn these things, pleasantly and happily, and his emotions may be set right towards the life he will have to live as a man.[3] If he learns them later, by looking them up privately in the dictionary, feeling all the time that Mother thinks them naughty, his emotions and his thinking are crippled. If he learns them later still, at adolescence, when sex-feelings are becoming a personal matter, there is a risk of fear, and of the shock of a sudden enlightenment. Let us make use of the few years which children will forget so largely, and which will colour their after-lives so strongly, even when forgotten.

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[1] Cf. Extract 5.

[2] Cf. N. March, *Towards Racial Health*.

[3] The way of telling the truth, and the degrees by which a child understands the father's part and the mother's, must differ of course in almost every case.

The second reason for answering honestly is that a child may run some risk if the question be not answered. If a child doubts about himself, or about his father or mother, he is most likely to be unhappy. For such thoughts and doubts are closely connected with fear, and continual worry. Poor little children! There is no need for them to be unhappy for this reason.

In a child of 5 or 6, sex life is beginning to draw on in another way. From birth onwards, the body is gradually becoming a perfect instrument of sex, and this process is not perfected suddenly or in a few years. Even in five-year-old children, certain parts of the body already give rise to special pleasures. The skin of the lips and mouth give pleasure when they are touched. So, too, do the parts of another region—the two lower openings, the anus and the opening in front. Now, a little child is learning to move, to touch, to play, to use the different parts of his body, in which he has a simple, innocent, and healthy interest. Quite accidentally he may touch those openings, and feel a pleasant feeling. Quite innocently he may go on with the 'play' that produces those pleasant feelings. But there are two strong reasons why he ought not to do this. One is, that such play is bad for his general health at the moment. It spoils his sleep. The other reason is equally strong. The frontal opening and the nerves connected with it will be very important in later life. They become the pathways of sex impulse. If a little child plays with them habitually, he may set up an excitability there, which will make it more difficult for him to control himself later on. Or else, the practice may have a bad effect years later. At adolescence comes the time when sex feelings take their definite shape; their true value is that they carry over all our best desires towards another person, and that a person of the opposite sex. Now this, the most important transition of our lives, may be hampered by the lingering effects of earlier bad habits.

### vi. *Discipline and Thinking*

The troubles of L., and of Thomas de Quincey, had similar causes. When the children were 'good', the natural emotions of self did not get their proper gratification. Many children have a ‘ naughty stage ’ at 2, or 3, or 4 ; and then they seem to become more obedient. The reason is simple. At 2, or 1½, or 2½, or at some time, the idea of ‘ what is good ’ begins to set itself against the strong sense desires. The current is crossed by something under water and the ripples show it. But most children find that obedience leads to greater gratifications than disobedience. The pleasant things are not rewards. They are all the interesting desirable things that can be done, if one is not always squabbling. The children find a natural pleasure in the things themselves, and in the cheerful interest and approval which surrounds them. ‘ Goodness ’ ought to be equivalent with Happiness for little children. There is no more fatal mistake than to alienate happiness from goodness.

So one must begin teaching a child to be moral in a very simple, limited way.[1] Very often children’s ‘ naughtiness ’ is not their fault. (A little child who is only just learning what a truthful speech means is not really ‘ naughty ’ when he tells a lie. It is a case for explanation, not slapping.) There are very great dangers in forcing on children a morality too far in advance of their powers. These dangers exist because of the peculiar way in which a childish mind works.[2] Those who deal with little children must know what this mechanism is. It is less clearly visible in a healthy child than in a child who has some temporary trouble. The following case shows it very clearly indeed.

A little boy was the only child of parents who lived in very lonely circumstances. Their baby was always with them ; he lived in their study and slept in their room, and he never spoke to any other child. The parents were strong in intelligence and in conviction. They were leaders and inspirers in their own circle of Plymouth Brethren, living with an intense sense of the immediate presence of God. Their little son thought of God ‘ as a sort of Fourth in our party ’. In fact, he confused his father with God. Both ruled the family ; both were always right ; both knew everything ; both were Truth. The parents laid great stress on absolute Truthfulness. They did not even let him know that stories existed, of which not one word literally was true. The parents ruled their common life by the will of God, at every point, and they did not mitigate the word of God for their child.

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[1] Cf. Extract 4, and Section I. iv.

[2] This peculiar mechanism has only been discovered recently by Dr. Freud of Vienna.

The child lived ‘ as a mere part of them, without individual existence, . . . I was mirthful when they were mirthful, and grave when they were grave ; . . . I was neither discontented nor irritable ’. One would have expected some resistance, some naughtiness ; but, on the contrary, the good child, and the devoted parents lived together with a holy cheerfulness.

Between the fifth and the sixth birthday there were some curious events. The little boy heard his father make a mistake in some trifling story about something that had happened during the day. He discovered, ‘ My father was not as God, and did not know everything ’. The discovery was ‘ a shock ’, a thunder-clap. A similar case occurred again. This time, the child’s conclusion was, ‘ Probably father knew very little ! ’ And with this thought the child had another, and a curious feeling ; that there was somebody else living with him, inside his own body, and that this other person, too, shared his secret knowledge that his father knew very little. In this odd way he became aware of ‘ Self ’.

About this time the child invented ‘ Magic ’—certain practices which he thought would give him strange powers. He thought that if he could find out some sounds, which he imagined to exist, he would be able to make the birds fly out of the pages of his father’s Natural History books. ‘ This idea contended with the . . . ideas of religion which my parents were continuing, with too mechanical a persistency, to force into my nature.’ At the same time, the little boy became very frightened. At night, he woke up in terror, crying and screaming ; by day, bursts of tears, fears of burglars, of all sorts of things ; finally a crisis,

> ‘ crying, sobbing, and banging my head on the table ’. ‘ While this was proceeding, I was conscious of that dual individuality, . . . since while one part of me gave way, . . . the other part seemed standing aloof, much impressed.’

After this crisis the child quietened down. But

> ‘ several things tended to alienate my conscience from the line my father had so rigidly traced for it ’.

When he was nearly 6, the child disobeyed. His father caned him.

> 'For some days, I went about with a murderous hatred of my father. . . But . . . after a while, I forgot, and thus forgave him.'

The sixth year of life ended with an extraordinary episode. The child had long been troubled by questions about his father's knowledge, and especially about his knowledge of God. He asked his father what idolatry was, and persistently questioned him, until he got the full answer, that it was praying to something that was not really God, and that God would show His wrath instantly upon an idolator. As soon as the child was alone, he knelt down before a chair, and said his ordinary prayer to it—' O chair '. ' Then I waited, very much alarmed, but still more excited.' Nothing happened.

> 'My father, therefore, was not really acquainted with the Divine Practice in cases of idolatry. . . . And with that, dismissing the subject, I dived into the *Penny Cyclopaedia*.'

Those were the facts ; disconnected and foolish, as the child thought when he grew up. But there is a possible explanation. It brings all these remembrances together, and makes them a whole development, full of meaning and connexion.

A little child is full of desires for simple satisfactions. His mind is a mind developing by trying to get what it wants. And then he begins to feel the conflict between these desires and the better ideas he has accepted from teaching. The conflict is more or less sharp, as the teaching is more or less advanced beyond his natural state. That little boy was faced by a very lofty morality indeed. A full-grown person might end such a conflict by a prolonged piece of thinking, by that careful thinking out, and choice, that makes ' willed action '. We are apt to assume that a child does so too ; but not at all. A very immature mind works in another and a simpler way. It has a natural way of dealing with *what it does not like*.[1] He puts it in a part of his mind where he is not aware of it. As we say usually, ' he forgets '. Usually what he forgets is the advanced idea. But sometimes a child actually does do what he dislikes, on the strength of some idea which his mother has taught him. Then, when ' he is good ', it is the simple sense desire that he regrets, and puts into that same region of his mind, where he is 'not aware of it'. He is treating 'what is not counted good' just as he treats 'what he does not like'. To this putting away is given the name 'Repression', and the very moment he 'represses' for the first time he makes the beginning of two parts in his mind, both equally alive and real—the conscious part, which he is aware of, and the other part, which he is not. But this second part is there, full of repressed things which are alive. During the first five years of life, both parts are growing.

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[1] Cf. Section IV. iii.

During that time our little boy learnt to 'repress' many things, not only really naughty things, but a good many innocent little things too. The ceaseless enveloping influence of the parents gave a tremendous weight to his power of repression. Probably the child did not even feel what he was doing.[1] Most certainly the parents did not know. His misfortune was, that the harmless, natural impulses of his age were partly suppressed, and these were the very things which he ought to have worked out. He ought to have been finding out how to behave by collisions with other children, naughtiness, stories; out of this, his little 'self' ought to have found itself. Even his feelings were only the copy of his parents' feelings. His conscious life did not really draw out his deepest emotions. Thus for five years repressed emotion and desire accumulated in his unconscious mind.

Repression turns a bad energy out of the conscious mind, but leaves it alive and untouched. It can come back to the conscious mind, in the old shape; and besides, the energy is not available for any other use. So there is a perpetual fight between the repressed desires and the repressing powers. To the five-year-old boy, an escape from his life became necessary. But externally everything went on perpetually the same. So the escape had to be a mental escape. He might have said to himself openly, 'I want my father to go away; I don't love him, and I don't want to please God'. But he was far too affectionate to take this relief. How could his mind save itself?

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[1] Repression may be either putting a thing out of the conscious mind, or, never even allowing it to come into the conscious mind. We can forbid a thing to come into our minds, perfectly unconsciously.

By the fifth year (or before) a childish mind has found a new way of dealing with conflicts between the Good and the Desirable. It learns to put the original desire in a shape in which it may enter the conscious mind. Our little boy notices especially, first, that his father makes one mistake, then that he knows only a little. He thinks out his father's real weakness, the reverse of his apparent weightiness. The child is using not repression, but a process of thinking. It is energy from the unconscious underworld that carries him through this long train of thought. Instead of saying, 'Bother my father!' he thinks 'My father isn't so important as I thought'. One notion is displaced by another which is more respectable. This process is called Displacement.[1]

At this stage the child has gained one important thing. His real self bursts up from unconsciousness. He has recovered his Self.

This is the first independent work of mind. But yet the child has not got the opportunities which he needs—opportunities to be his new self, and find out what he can do, and how things turn out. He thinks perhaps there is a magic, a power which can put everything out of its ordinary course. But he cannot find the magic word. And with the recovery of self-feelings he feels resentment against his parents, and this resentment fights and struggles against his love for his father, the strong theme of his ordinary life. But, as far as we know now, a child whose big affections are troubled becomes a frightened child. Fear soon outgrows the instinctive stage, and then it becomes connected very closely with tender feeling; we do not know yet how or why. But it explains why this time was an epoch of tears and fears.

It passed when, in his growth, the child advanced. He began to think again. He had proved to himself that his father was not all Knowledge, now he suspects that he is not wholly Truth. In saying his prayers to the chair, what was the little boy doing? 'An act, . . . puerile and preposterous!' the doer of it said when he was grown up. At the time, he thought he was simply seeing if what Father had said was true. It meant far more than the child saw in it, or the man. It meant: 'Is it possible to discredit Father's knowledge of God?'

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[1] People give another name to displacement of a bad desire by a really good aim. They call it Sublimation.

His father said God would punish him if he did certain things. Would He? If not, the boy need not really bother any more about all the demands made on him by his parents. And at once when the experiment was over, the child went off, freed, to quite other affairs. Repression made the child wretched; displacement cured him.

Let us contrast this case with another. During his first fortnight at school Philip[1] did not speak to any child at all. Once or twice he tried to take their toys away. He turned his back on friendly children, silently. He never obeyed. In the third week Philip was called upon to stand up, and, as usual, sat still on the floor. But Willie helped him gently on to his feet. Next day Philip laughed, for the first time, and ran about with another child. On the next day Philip tried to take some bricks from Robert, who went to the teacher in his distress. She asked Philip if he would like a toy of his own, and gave him bricks, with which he played about. Next day he tried to push into the line out of his place, and the teacher would not let him, but called him back. On the same day he had a little fight with another boy, and the teacher saw it, and said nothing. On the three following days he had little scuffles daily, and he made friends with a little boy and a little girl. So he went on day by day. A fortnight later, 'Philip played roughly with Ben and Jack. When Jack got the better of him, Philip said roughly, "Get off!"' But then, Jack tried to take Lena's bricks away from her, and Philip made him leave her alone. And now, Philip obeyed commands.

The contrast with the first case is clear. Philip is living in a world of children. The grown-up person present in the room is very little present to his mind. Secondly, he lives among them freely. He tries his own self upon them. And they treat him as they think they ought, practising and teaching a childish morality. In all these ways Philip was in a very different position from the other little boy. But there may be some likeness in the mental processes of the two little minds. Philip does not have to repress his impulses; indeed, he shows a bad aggressive tendency at once. But as the other children oppose him, he begins to repress his violence, and, at last, to displace the simple aim of selfish pleasure by an attempt to do justice; this surely is the only possible interpretation of his interference on behalf of Lena. This does deserve to be called 'sublimation' of the aggressive tendency. At present we do not really know how sublimation happens, nor what conditions make it easy. But two things may have helped Philip: first, the free life among the other children; and second, the extreme limitation of the teacher's demand for obedience. Among the other children Philip's nature had play, and yet underwent all the strong influences of imitation, suggestion, and sympathy.[1] The teacher insisted on obedience only rarely. Yet that teacher believes that not only single obediences, but the habit of obedience, must be made in each of these little children. She wants to do this, and she does it. Why, then, did she let Philip disregard her so often? For this reason: she felt sure that in time the child would obey of his own action. Two things would draw him on—seeing all the other children obey, and, above all, wanting to do the things to which the teacher's commands tended. So the teacher insisted only on a few points, like not breaking the order of the line. This was a point on which she could make the child obey. She had made up her mind which were the essential points in the management of her class, and these were only a few. Essentials are always few.

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[1] Cf. Section II. i.

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[1] Section V. iii.

# SECTION III

## THE AGE OF TRANSITION: 6½ TO 8½ YEARS

### i. *The Age of Transition*

People like little children partly because they can see them changing and growing. It is so amusing to see them changing every day. They learn some new words or do some new thing; they change, or rather advance than change. But often at about 6–7 years old they show real changes of a larger kind. A child becomes healthy, after a sickly babyhood. Parents notice this with pleasure. It is often the mental change that passes unobserved, though a teacher has every chance of seeing it, as it often shows itself in a change of attitude towards school work. There was a class of little girls; the youngest was 6, the majority between 7 and 8, and the eldest above 9. Their behaviour towards stories was typically childish. After a story they wanted to act, or to draw, or to 'be the man singing his song'. Consequently, the story often led to miscellaneous occupations—reciting, acting, claywork, building, and drawing. Of them all, the quickest in mind, the best in drawing and working, in acting and speaking, was Nora. At the end of some twenty minutes after the story she used to bring me a picture. Usually it had a simple, archaic beauty, clean workmanship, and severe design. Nora was often unsettled, but she would not suffer interruption when she was doing a picture; nor in her modelling. In acting she was the first actress of the class. She sulked if she was not cast for the chief rôle. Her acting showed that she was 'inside' the personage. She brought out little effects which the story indicated quite slightly. In writing, some time after, she reproduced a story vividly, and completely, and at length. Thus she showed that the work suited her. But in the last quarter of the year Nora became very different. Often, instead of wanting to draw, she chose a book. Instead of making something, she would rather write. At last she hardly drew at all, and reading and writing became her main occupations. Once when the others were singing, she said to herself, pettishly, 'This isn't a singing lesson—it ought to be history!' This expression was the outcome of a change. Nora spoke then as the representative of hundreds of children of her age, perhaps of most children within a year or two of her age. The transition which they make is but little understood as yet. It is only the superficial part of the change which is much recognized.

Nora was beginning to look upon things she did at school in a new way.[1] 'School' had been a life she led without thinking about it. She had been immersed in the living of the moment. The other members of the class still were. To them the story was still a great fantasy which they took into their minds and poured out again in acting or singing or drawing. That was the real ecstasy of the story to them. To them existence was still an undivided thing. But Nora was beginning to feel a difference between one subject and another. She separated the kind of experience a story gave her from other experience. She named it the history lesson. She wanted it to have its own ways of working, reading, and writing. Her chief interest was to have this etiquette followed, and get on with the subject, and see what came next. This arranging of subjects, this dissatisfaction with childish ways, this rejection of drawing and games, is one sign of transition which the teacher sees, and may see at any age from 6½ to 8½ in normal children.) In the arrangement of school work this change must be allowed for. The plan on next page shows how Professor Findlay met it when he was the head of the Fielden School, Manchester.

This plan shows a gradual differentiation of subjects out of the mass of experience. It rests upon the child's increasing power of holding an idea in mind and contemplating it.

Such are the outer forms of change. Underlying them there is growth which it is very difficult to explain, and this for two reasons. First, the growth is in deep levels of life which are not obvious to the eye, and secondly, we hardly understand what we do know of it as yet. (Probably the child's whole nature is involved in change. A great growth matures among the emotions. A child develops the power to care ardently for something a little removed from actual existence at the moment. He is still interested in his self, and he still loves his self; but his self is now not only his own little momentary pleasures and pains.) His self becomes inextricably entangled with ideas—ideas of right and wrong and other things.[1] The feeling of this change is well illustrated in Father Tyrrell's recollections.[2] No obvious sign of this deep emotional ripening may appear in ordinary children. Yet it is part of their ordinary development, or so the evidence compels us to believe at present.

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[1] A typical forward child. Burt found 1,184 children out of 19,645 who were in advance of the average of their age by one-fifth of their age.

### PLAN OF WORK.[3]

| *Class.* | *Age.* | *Work.* |
|---|---|---|
| Kindergarten | under 6 years . | No plan. Daily occupations. |
| Transition | under 7 years . | Reading and Writing. Counting and grouping games. Domestic work and occupations. Singing and Physical exercises. |
| Class I | under 8 years . | Reading. Writing. Measuring; Number games. Practical decimals and fractions. Building up tables. Stories. Study of surroundings. Physical exercises. Singing. |
| Class II. | under 9 years . | Reading. Writing. Similar number work. Stories. Study of surroundings and Industries. Physical exercises. Singing. |
| Class III | under 10 years . | Reading. Writing. Literature. Practical arithmetic. Nature study. History and geography together. Arts and crafts. Physical exercises and Singing. |

### ii. *Deficient Children*

Nora was about the same age as most other children in her class. But she was more advanced in mind than they. Her mind had leapt forward. Her mental age was more than her physical age. Apart from Nora and one or two others, the children were 'average'. Yet really these children were not absolutely upon a level one with another. Among normal children and normal people, every one does differ from every one else. Every one deviates just a little from the normal. one person's pace is a little quicker than that of another, and a little slower than that of a third, throughout mental life. In full-grown life the deviation is a very complex thing. In school we see it, and measure it roughly in school work. School work is not the whole of childish life, but still, school tests under school circumstances do show deviations of pace in school growth.

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[1] Cf. Freud's *Study of Narcissism* (E, Jones, *Brit. Journ. of Psychology*, 1920).

[2] Extract 9.

[3] From the *Demonstration School Record*. I *passim*. Manchester University publication.)

Many children have been tested, and some ‘ averages ’ have been made. Mr. Burt, the Psychologist to the London County Council, has calculated the limits within which a normal child tends to deviate from the average standard of attainments.[1] He concludes that a child of 5 years old will tend to deviate from it by about six months’ work ; that is, he will probably be within six months better or six months worse than ‘ the average ’. A child of 7 will probably deviate by about four-fifths of a year’s work. A child of 10 will probably deviate by a whole year’s work, backwards or forwards. So we must recognize that from the beginning people get on with life at different paces. Among normal people differences exist normally.

In the class described above there was one child who was 9. She could hardly write ; she could not join letters or space words. She could not put words together in a composition. Her words were put down ‘ without any sense ’, and she could not spell at all. She could read a little. She could do very simple sums if she had concrete material. She could learn six or seven lines of very simple poetry ; but then she forgot it all within a day. When she tried to copy a drawing, she made lines which seemed at first to have no relation to the drawing at all. In a few ways (e. g. in reading) she was on a level with a child of 5 ; but in most ways she was far less able than many a child of 5. This girl made a disagreeable impression on one. She was lumbering in her movements, and disproportionate. Her head was too large for her body. In her features there was some undefined lack of harmony. Her tongue seemed too large for her mouth, which was always open. Her nose was wide and thick, with a very low bridge. Her speech was not very intelligent, and it was not clear, because she slurred most of her consonants.

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[1] As far as they can be estimated now, by the very rough measure of the standards at school. Burt, *Distribution of Educational Abilities*, pp. 14–15, 24.

Mentally and physically this child is peculiar. She is typical of the class to which she belongs—the class of mentally defective children. Mentally, she has never made the ordinary transition. She cannot keep an idea in her mind as a whole, and leave it and return to it, and still keep it as a whole. Nothing more than a part stands out clearly to her, and even that shifts and changes, unless it is actually present to her eyes.

Being 9 years old, and equal at best to a child of 5, she deviated from the average of her age by about 4 years' work. An ordinary child of 9 may well be nearly a year behind his contemporaries. But

> 'On an average, the deviation of "defectives" from the normal is about four and a half times that of the normals. . . . The educational attainments of a so-called mentally defective child correspond on an average to those of an ordinary child of just over half his age.'[1]

Physically also this child is a typical defective. She cannot co-ordinate her movements. Her head is too large. Her speech is defective. Now each one of these defects may be symptoms of other things than deficiency. The open mouth and thick nose and clumsy speech may mean adenoids. The slurred speech may mean deafness. The over-large head may mean nothing at all. But if examination shows that it is markedly larger (or smaller) than the average,[2] and that the bad speech is due to a deformed palate, and that the face muscles do not control the mouth properly, and that the tongue is really too large, then the defects gain significance. Exactly these defects, grouped together, are characteristic of defectives.[3] Naturally a doctor must decide; he will probably keep the child under observation for some time before he decides to call her defective. The diagnosis of deficiency is not easy; nor is it certain, at the present time.

If a teacher finds all these symptoms in a child, she may have suspicions. But she will not find them very often. Mental deficiency is not common. There may be one such child among 125 children in elementary schools. There may be 1 in 200. Estimates vary. In 1904 a Royal Commission investigated the numbers of mentally deficient children in certain English districts. In the worst area they studied, the proportion was 1·2 per cent., that is, 6 children in 500. In this area, in the largest department, there would be five or six, not one in each class. In the best area studied, the proportion was 1 in 300 children, one in a fair-sized school. Consequently, nothing can be less justifiable than to call a child deficient unless the name be given by the doctor after diagnosis.

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[1] Burt, op. cit., pp. 15–16. Cf. Binet et Simon, *Mentally Defective Children* (1914), p. 41: 'Retardation of 2 years under 9, and 3 years over 9.'

[2] Average circumference at 7 years old: Boys, 20¾ in.; Girls, 21⅓ in. Average deviation at 7 years old, ½ in.—Tredgold, *Mental Deficiency*.

[3] Cf. Extract 18.

### iii. *Backward Children*

Since the discovery of mental deficiency (a comparatively recent event) people have been inclined to discover too many defectives in their classes. As the figures given show, deficiency is a rare state. The reason why the numbers of defectives are often so over-estimated is, that there is another class of children which can be confused with defectives, and are. This class really is a large one. Mr. Burt found 1,295 children belonging to it among 19,645. It is the class of dull or backward children.[1] In school there is every reason why these two classes should be confused. Two children sit side by side at the bottom of the class; both write hardly at all, read hardly at all, get no sums right out of 10, and are wrapped in stupor. They seem alike.

Yet really they are separated by one insuperable barrier. One is defective; and deficiency cannot be cured. It is due to an absolute defect or disease of the brain. Such a brain cannot mature. The other child is dull. He is dullness itself. But dullness is not incurable. It is not caused by any irremediable damage. It may be due to brain and mind stuff of rather poor quality. But such a brain will mature. With special teaching the mind itself may improve. Dullness may be due to causes which can be removed altogether. It may be that the child has never been grounded properly in concrete number, and so cannot do book arithmetic, and is in a school where too much attention is paid to arithmetic only. The child may be going to bed at ten or eleven, getting up at five, living on tinned salmon and tea. Lack of sleep and malnutrition and fatigue will make a child dull. Or the child may be a little deaf, or short-sighted, or he may have adenoids, or he may have been ill lately, or, long ago, he may have missed a good deal of work. Lastly, there are some people who inherit a tendency to develop late. We have seen how within the normal ranks people's pace of growth differs. There are some people who go very slowly for the first years of life, and then, at a bound, overtake their contemporaries. I have known a girl who, at 16, was far behind, and only with great difficulty kept in a decent place at school, and at 20 was a leader among her equals in age.

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[1] Cf. Extract 18.

The dull children are often those who are not well suited by the usual school subjects and the usual methods of teaching. This is why they begin to stand out at about 7 years old. For that is just the time when the ordinary children are turning into real little schoolboys and schoolgirls.

But how are we to avoid the confusion between dull children and deficient children? It is impossible to do so by the first glance.

Dull children are usually less extremely backward than defectives.

> 'By "backward" (dull) may be understood children . . . who are retarded by 15 to 30 per cent. of their age, and . . . deviate . . . by about twice the average . . . deviation'[1]

(of normal children of the same age).

Secondly, a backward child needs a careful physical examination. One may put far too much faith in apparent signs, such as bad speech, an open mouth, a dazed look. Such signs may all be explicable by causes quite separate from deficiency, as was said above. Adenoids may easily make a child dull, and their removal may make him almost normal.

Thirdly, a responsible person must find out all about the child's life out of school. Dullness is often prepared out of school.

Lastly, the backward child ought to have a course of special teaching. Dullness is perfected in school, by forcing a child a way she cannot go. History and science may make a child stupid and naughty, and cooking may make her really intelligent. Cooking can provoke thought and can train it. Latin may make a boy perfectly dull, and carpentering may educate him. For this reason, a dull child ought to be taken out of the ordinary class, and watched during a course of special teaching.

It is the backward child, much more than the defective, who is profitable to a teacher.

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[1] Burt, op. cit., p. 36.

# SECTION IV

## CHILDREN OF 9 TO 11 OR 12 YEARS

### Tables showing Average Height and Weight

English Girls, 1883

| *Age.* | *Average height.* | *Average weight.* |
|---|---|---|
| *years.* | *in.* | *lb.* |
| 7 | 44·45 | 46 |
| 8 | 46·60 | 52·2 |
| 9 | 48·73 | 55·5 |
| 10 | 51·05 | 62 |
| 11 | 53·1 | 68·1 |
| 12 | 55·66 | 76·4 |

Girls in English Counties and Urban Areas, 1910

|  | *England.* |  | *County Areas.* |  | *Urban Areas.* |  |
|---|---|---|---|---|---|---|
| *Age.* | *Height.* | *Weight.* | *Height.* | *Weight.* | *Height.* | *Weight.* |
| *years.* | *in.* | *lb.* | *in.* | *lb.* | *in.* | *lb.* |
| 7 | 44·85 | 45·2 | 45·12 | 45·5 | 44·65 | 44·98 |
| 8 | 46·29 | 48·94 | 46·35 | 49 | 46·25 | 48·9 |
| 9 | 48·7 | 54·59 | 49·45 | 55·35 | 48·25 | 54·15 |
| 10 | 51·1 | 58·9 | 51·28 | 59·39 | 50·95 | 58·58 |
| 11 | 52·55 | 65·24 | 53·39 | 66·84 | 52·1 | 64·3 |
| 12 | 54·68 | 73·89 | 54·55 | 74·6 | 54·85 | 72·3 |

English Boys, 1883

| *Age.* | *Average height.* | *Average weight.* |
|---|---|---|
| *years.* | *in.* | *lb.* |
| 7 | 45·97 | 49·7 |
| 8 | 47·05 | 54·9 |
| 9 | 49·7 | 60·4 |
| 10 | 51·84 | 67·5 |
| 11 | 53·5 | 72 |
| 12 | 54 99 | 76·7 |

BOYS IN URBAN AND COUNTY AREAS IN 1910

| | *England.* | | *County Areas.* | | *Urban Areas.* | |
|---|---|---|---|---|---|---|
| *Age.* | *Height.* | *Weight.* | *Height.* | *Weight.* | *Height.* | *Weight.* |
| *years.* | *in.* | *lb.* | *in.* | *lb.* | *in.* | *lb.* |
| 7 | 45·15 | 44·55 | 45·4 | 47·3 | 45 | 46·3 |
| 8 | 46·95 | 50·4 | 47·5 | 51·35 | 46·85 | 50·15 |
| 9 | 49·1 | 55·39 | 49·85 | 57·04 | 48·7 | 54·54 |
| 10 | 50·95 | 60·4 | 51·2 | 61·15 | 50·85 | 60 |
| 11 | 52·84 | 65·98 | 53·2 | 67·85 | 52·65 | 64·95 |
| 12 | 55·05 | 72·85 | 55·2 | 73·85 | 54·75 | 71·58 |

### i. *The Age of Stability*

THE age of stability means the age between 8 or 8½ and 11 or 12—the period between the little transition and the big transition.

After the quick growth of the previous years, the rate of growth now averages about 2 in. a year. On a total of inches which is increasing yearly, 2 in. is a decreasing rate per cent. It represents a decreasing drain upon the total fund of life. Hence boys and girls have more endurance, and more energy to spare, than little children. Internal changes in the organs are few. The main illnesses of childhood are over, and the main illnesses of adolescence have not appeared. The physical strain of the first entrance to school is over. Mentally, too, the child is steadier than in his babyhood. The mists of the age of make-believe have cleared away. The child knows his way about his home and his school, and in the streets that lie between them. It is true that he knows but little of the wider world. Yet, limited as his thinking and his actions are, they are efficient. Nature predisposes him, mentally and physically, to regular ways that still keep great interest for him. In this period, as in the earlier one, certain dominant activities stand out. They existed before, but now they become so marked that we cannot help seeing them.

### ii. *Skill*

At 9 and 10 years old, boyhood and girlhood spends much of its time in 'messing about'. By this phrase is meant the use of time, and much real skill, to reach ends which grown-up people do not always think valuable. But in all this nonsense it is real dexterity which the children show. The reason for it is very simple. It is probably in the ninth or tenth year that the eye becomes a perfectly normal seeing instrument for the first time. It is only from this age on that sight is quite adequate, by the normal full-grown standard. Again, in ten years' practice, children have learnt to use both big muscles and little ones at one moment,[1] and to combine different sets of muscles in complicated ways. And they have accumulated judgements about distance, and shape, and force. They can judge the exact force necessary for a blow or a grip, on the basis of ten years' work of nerves and mind. And so the age of stability is also an age of skill.

### iii. *Memory*

> ' Up the airy mountain,
> Down the rushy glen,
> We daren't go a-hunting
> For fear of little men—
> Wee folk, good folk
> Trooping all together,
> Green jacket, red cap, and white owl's feather.
>
> Down along the rocky shore,
> Some make their home.
> They live on crispy pancakes
> Of yellow tide foam:
> Some in the reeds of the black mountain lake
> With frogs for their watchdogs,
> All night awake.'

Long ago I had to teach this poem to Standard II. I place myself now in that class-room, in the critic's chair, to hear that lesson, and this is what I see. A clean blackboard, the new teacher looking at the children, three blocks of rather dirty little London children staring at the new teacher. The teacher begins. She speaks to them about fairies. Many little faces brighten up. Among the little exiles at the back, one or two stop fidgeting. ' Right, children, this is interesting ', I think. She speaks of the misty hills of another country, the salt wet wind, the people, in their little dark houses beside glimmering fires, listening to the noises outside, a little frightened—listening to the fairies—' And this is what the people say about them ', and she reads the two verses right through.

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[1] See Section II. ii.

Now she re-reads the first verse, and looks up expectantly. The 'bright' children do look bright, but the majority look perplexed or wooden. I should like to tell her that she has not explained 'little men'. But it is years ago. She asks, 'What does that verse say?' and a bright child explains to her, and incidentally to the other children, so that they see that the little men and the wee folk are the fairies. And when the teacher sees a child eating a sweet, and swiftly asks, 'Who are the little men?' quite a number of hands go up.

The teacher comes to the next part of the lesson—the learning by heart. She says:

'Up the airy mountain, down the rushy glen,
We daren't go a-hunting for fear of little men.

Say that all together, softly.'

The class utters a mis-shapen murmur, crested by certain quick vigorous voices, which run quickly on to 'Wee folk, good folk', &c. The mass gets down to 'little men'; some children hardly say anything. The ragged murmur dies away.

She repeats the lines. 'Say that again.' They repeat, less successfully than before. 'Now, "Wee folk, good folk, . . . white owl's feather".'

At last the whole verse is attempted.

The rest of the lesson is occupied with rearrangements of this theme; the right block, the middle block, the left block repeats; the first half, the last half, the whole verse are repeated. At the end, the bright children know the whole, the average children know the first verse properly and the second verse badly, for they misplace the pairs of lines in it. A few children hardly know anything. We are all rather tired of it. I call myself apart, and say, 'What have you been trying to do? First, you tried to make the children wonder what was coming, and at the same time you tried to prepare them to understand what was coming, and all quite rightly. Then you read the poem. After it you questioned on little points, to be sure that they had understood. Even from the point of view of teaching them the words, you did quite right in doing all this. By interesting them you were already helping them to learn the poem by heart more easily. One naturally remembers what has interested one. One can remember best what one has already understood. Every one knows this in real life. And for some people, to understand is actually to know by heart. When such people see the connexion between the ideas, they know the words by heart. A memory of this sort is called a "logical memory". A few people have it almost pure. Most people have a little logical memory. And it is the quality of memory which is useful above all others. You must strengthen it in all the children by practising it."

'But some children hardly seem to remember that way at all.'

'At present, perhaps, they don't (though you must help them to do so). How must they learn?'

'I suppose by going over and over it. That was why I spent so long repeating it.'

'Yes, that 's right. That is called Rote memory.'

'But—excuse me—if logical memory and interest together make a child remember, and are the things that really matter, ought one to have the repetition part at all?'

'Well, I expect you noticed some did know it, straight off. But the poem was very short and simple. To know a thing word-perfectly most children and most people need repetition. This is the thing we older people neglect too much. We get to rely too much on our well-practised logical memories. O yes, you did certainly need a repetition part. Now, in the repetition part, what did they have to depend on for the words?'

'On hearing me say it.'

'That is, you gave them sound impressions. What about the children who depend on sight impressions?'

'I suppose I could have written the words on the board.'

'Or, much better, let them each have a copy. Memory, whether rote or logical, works in different people in different ways, that is, in different imagery—sight, sound, movement imagery. It is essential to provide for each, and let the class hear it read, read it, repeat it themselves. Next, on what did they rely for the amount they learnt at once?'

'Well, on me.'

'And the pace at which they learnt?'

'Well, they all took the same time.'

'But some knew it from one hearing, and others, after several hearings, not at all! Now notice the lines; if you break off at

" men ", you cut off the next two lines, which ought to be in the closest apposition to them, as carrying on the one meaning. But the children learnt the first lines as an isolated whole, the next two as an isolated whole, and so on, so that at the end they failed to sort the pairs into the right order. Besides, you had carefully taught them *not* to pursue a meaning to the end, but to check in the middle of their rush. You must train them to divide according to meanings. Such groups of lines are called meaning wholes. And remember that the size of meaning whole which a child can take differs probably for every child in the class. Some children could have dealt with the whole two verses as one meaning whole.'

'Then, if some children need one length and some another, and some visual imagery and some auditory, and some learn slowly and some learn quickly, and absolutely no two alike, why, then my whole lesson was utter rubbish ! '

'Well, we're only speaking of half of it—the " learning by heart " half. And so let each child suit itself ; give each one a copy ; when they all understand it (if they are interested), let each learn it quietly, not silently, and then, hear them individually.'

Turning in my critic's arm-chair, I thought that all the mistakes of the lesson arose from ignorance of the difference in memory between one child and another. Yet this difference is very clear, even within the limits of a class. It is notorious in a few extreme cases. Compare Thomas Macaulay at 8 or 9 with any ordinary child of that age.

> 'During the first part of his life, he remembered whatever caught his fancy, without going through the process of consciously getting it by heart. As a child, . . . he accompanied his father on an afternoon call, and found on a table the *Lay of the Last Minstrel*. . . . On his return home, he sat down on his mother's bed and repeated to her as many cantos as she had patience to listen to.'

At 13, he read two poems once,

> 'and never gave them a thought for forty years, at the end of which time he repeated them both without missing a single word. As he grew older this wonderful power became impaired, in so far that getting by rote the compositions of others was no longer an involuntary process.'[1]

Between Macaulay and ourselves the gap is immense. But there is a gap, though a much smaller one, between the best and the worst in any one subject ; often there is a gap even between two children vaguely called average. In this respect of memory, no two people are born quite alike. For our whole memory depends upon a native gift. This gift is the tendency to retain past experiences in the mind, and the power to recreate them, in the mind, as they happened. Just as nervous energy tends to go the way it has been before in the solid brain matter, so mental energy tends to go the way it has gone before in the invisible mind. The old marks remain. This power of keeping past experience is called the power of retentiveness. It is in the amount of this power inborn that people differ.[1] And retentiveness is the gift that underlies our memories.

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[1] Trevelyan, *Life of Macaulay*, i. 68.

If retentiveness were quite ungoverned, it would act our past over again in the order and fullness of the past.

But it is not this which happens. If we let our minds dream, we pick out one thing here and one there ; we hover over our past and dip, like a swallow over a stream. Things come through our minds in a long shadowy procession, full of the strangest figures, all unmatched ; we have not directed the show, consciously, and we wonder at it. Yet afterwards we can find, in our fantasy, a connexion of some loose kind. But some things have directed it. Recent experiences and frequent experiences tend to come forward. So does any experience at all like an experience which has come forward. Recency, frequency, and likeness of experience : these three factors choose out things; they shape the simple power of retentiveness, roughly. When we allow these factors to have free play, we are 'associating' various past things together. Everybody notices the tendency to do this, in his own mind.

We can re-collect things in stricter groups, and tie them more firmly together than by the loose and careless bonds of association. We can select things consciously, on a definite basis, scrutinizing their claims ; and we can tie them firmly by repeating them over and over. In this way we make that particular use of retentiveness and association which we call our memory. We have to do this for each set of

[1] Miss Canning, sister of the statesman, learnt the Thirty-nine Articles, and then the whole of *The Times*, by heart, in a few hours.

things to be remembered. To do so requires more work in some minds than in others.

We saw in the recitation lesson that the children did not all know their work equally. I thought of the lessons which were to come, and of the arrangement of the work in those lessons. We have to let them build up their memory of the poem. (i) How soon ought the children to have more practice ? (ii) Ought they to spend a whole lesson looking it over, or should I let them have a look at it quickly, at several different times ?

(i) *When* should the future practice be ?

They need it, because some of them cannot say the whole piece now, and, of those who can, some will have forgotten part a couple of days hence. They are all busy forgetting it now.

While we are forgetting, is there any moment when a few repetitions quickly applied will stanch the flow of material into forgetfulness ? How quickly, and how evenly, and how much, do we forget ?

This question attracted the attention of a teacher forty years ago. He was a tutor at the University of Berlin, and he was not known, except to his own pupils. But, though obscure, he had had an original idea, even in his student days. Those days were interrupted by the Franco-German war of 1870–1 ; but when he was demobilized, he went back to the University, at Bonn, on the Rhine, back to his degree-course, and back to his own idea. His idea was, that psychology ought to be studied largely by experiments upon the human mind. Very little of such work had been done.

Fifteen years later he published a book, *Memory*, in which he described experiments which he had made upon his own memory. The results made him famous. The book is still read ; his methods are still used ; his name is more widely known than his book. His name was Ebbinghaus.

Among his inquiries was one into the rate at which he forgot, and the amount which he forgot. He sums up his results thus :

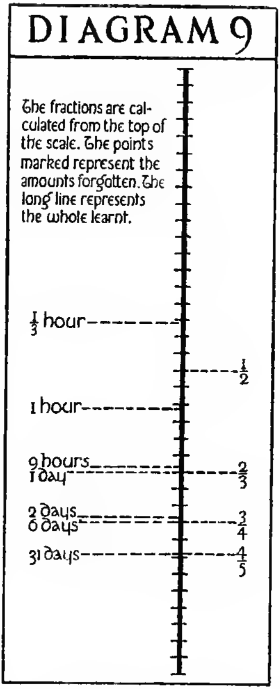
> After twenty-four hours, one-third of the first complete learning was still retained ; after six days, one-fourth ; after a full month, one-fifth.

His results can be stated more fully.

| | | | | |
|---|---|---|---|---|
| After | ⅓ hour | | 42% | was forgotten. |
| ,, | 1 | ,, | 56% | ,, ,, |
| ,, | 9 | hours (nearly) | 65% | ,, ,, |
| ,, | 24 | ,, | 66% | ,, ,, |
| ,, | 2 | days | 72% | ,, ,, |
| ,, | 6 | ,, | 75% | ,, ,, |
| ,, | 31 | ,, | 80% | ,, ,, |

Or alternatively as in Diagram 9:

DIAGRAM 9


The fractions are calculated from the top of the scale. The points marked represent the amounts forgotten. The long line represents the whole learnt.

From Ebbinghaus's results we learn Ebbinghaus's rate of forgetting. He lost more than half in one hour, and nearly two-thirds of what he had learnt in the first nine hours after learning. This makes, as it were, a first period in which forgetting goes quickest.

After the nine hours there comes a curious arrest. Ebbinghaus remembered almost as much at noon next day as he had done at bedtime the night before. This arrest puzzled Ebbinghaus himself very much. He did not believe that it was genuine. He thought he had made a mistake. But many of us have a familiar experience of actually increasing our recollections just at the time corresponding to his. After a concert a lady could not remember the 'march' theme of a certain movement; 'Oh, well,' said she, 'I shall remember it tomorrow.' This is what many people do. Moreover, experimental results show that for some people the best plan is to begin re-learning after twenty-four hours, that is, to repeat lines learnt on Monday morning, on Tuesday afternoon. 'With one reading a day for sixteen days, the retention was about 80 per cent. after two weeks' interval.'[1] Perhaps, under this result, and the ease with which a class register is learnt by heart, lies the same factor.

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[1] N. Perkins, *British Journal of Psychology*, vii. 261.

There is, indeed, a factor which comes into play just at this time and opposes forgetfulness. It is the spontaneous improvement of memory which sets in within the twenty-four hours, and reaches its greatest strength on about the third day from the first learning. This strong backwash of the experience is called reminiscence.[1] It seems to be strongest in young children, and to work in them for the longest time; in children of 6 it is strongest after two days, suffers little decrease on the third day and on the fourth.[2] In the age of stability and of early adolescence its power is somewhat less and its span shorter. It reaches its height after two days. In people above 20 it is weaker (although common experience (see above) teaches us that it survives). These results are those obtained by Mr. P. B. Ballard in 1913.[3] They explain why Ebbinghaus detected the curious arrest after twenty-four hours; perhaps they explain why the arrest was not even more marked, for the experimenter was above 30 years old. Mr. Ballard has shown that after two days' clear interval, children can sometimes recall more than they can after fifteen minutes. He asserts that for children above 7 the usual interval for strongest reminiscence is ' undoubtedly two days '.[4]

This saying gives the answer to the first question. It is after two days that re-learning should begin, in Standard II.

(ii) Ought the children to spend a whole lesson in learning the poem again, or will a few repetitions at different times do as well?

As a matter of taste, I should prefer the second way! But it is the economic and sensible way that one wants to use. Teachers have never shrunk from mere repetition. If that is the best way, it must certainly be taken.

As experimenters agree about the rate of forgetting, so do they agree in their answer to this second question. They say that it is not the number of repetitions at one time, but the number of fresh attacks, that really matters.

> All investigators seem to agree on the advantage of distributing repetitions over several days. . . The smaller the number of repetitions at each sitting, the greater the success. . . . Two or three days' interval if there is only one repetition; if there are four or eight repetitions, an interval of three or four days is as good.[5]

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[1] By P. B. Ballard, ' Obliviscence and Reminiscence ', *British Journal of Psychology*, Mon. Suppl. II.

[2] Ibid., p 29 and p. 11. [3] Ibid., p. 31. [4] Ibid.

[5] Perkins, loc. and op. cit. Cf. Valentine, *Experimental Psychology*.

We are to start, then, re-learning after two clear days ; we are to repeat once or twice at a time, probably, but in this we must let individual differences have their own way. Some people may do best with single, daily repetitions, others with two or three repetitions on alternate days. But the general rule is to be 'a few repetitions at a time, on several occasions'; it is to be 'little and often'. The two advantages of following this rule are, that the memory built up is a very lasting one, and that we save the time often wasted in vain repetitions long after repetition has ceased to be profitable.

Teachers often say that psychologists do not give them 'schoolroom' advice ; here is a piece of perfectly plain practical counsel ; let teachers use it.

In itself, forgetfulness is a great riddle. People used to think of it thus : Memory is the activity which holds on to certain experiences and revives them ; the experiences it selects are those which are frequent, recent, vivid, or related to our purposes and interests. Forgetfulness is merely being passive ; a dreamless sleep ; a natural vanishing of things not selected.

But about twenty years ago a fresh set of inquiries began. People had noticed that often the things forgotten were just those which had a very real importance for us. Why should these things vanish ? People began to ask : Is it possible that they vanish because we want them to go ? Can we use forgetfulness just as we use memory, actively ? Is forgetfulness also the tool of our motives and purposes ?

After twenty years of evidence and argument we are still stumbling over difficulties on the threshold. But one clear truth has come forward. One must recognize now that forgetting happens in two ways. One is the natural vanishing which tends to overtake all our learning. This is the process of which Ebbinghaus tested the rate. Its causes are not at all understood ; but people will not be puzzled about them, for the process itself seems only what we all expect to happen.

The second kind of forgetfulness is quite different. It is the sort which we use unconsciously, and yet on purpose. It is the veil which we draw over certain things because we do not like them. Some experiences are intolerable ; we reject them from our full consciousness. The 'intolerable' experiences are not necessarily very tragical or hideous ones ; little tweaks are very painful in a sensitive place ; we suffer in our vanity as much as in our passion. Just occasionally this kind of forgetfulness may be detected in school; and sometimes, upon reflection, we can trace it in slips and forgettings of our own.

Our natural tendency is quite simple. It is to forget all that we do not like.[1] In early childhood this is what we all do. What we need is an education of this tendency to repress things. If we forgot all our pains and misadventures we could not guard against similar ones. The education of forgetfulness consists in learning to remember disagreeable, serviceable things. We do this more easily if we learn to look at them impersonally and without emotion. 'Think of it as if it had happened to somebody else.'

My thoughts travelled back to the recitation lesson. I thought of the difficulties and the surprises which memory work would bring to my new teacher. People are still naïve enough to be surprised that children remember one thing well, and another not at all; and this although every one has said, 'Dear me, I cannot remember $x$[2] at all!' 'But can you remember $y$[2]?' 'O yes, I have quite a good memory really!' This speech is perfectly accurate in the facts. But there is one great inaccuracy in the speaker's thoughts. He talks about 'his memory', as if he had one memory, with a power exactly equal for all matters, and as though this 'memory' failed whenever it came to one class of facts, in a most unaccountable way. Of course, this is just what the speaker believes about his memory. But is it quite true to life?

If you examine the speaker further you will find that his 'memory' is not exactly equal for all classes of matter. He probably remembers things in some such order of merit as this:

(1) Anything that happens to himself.

(2) Anything closely connected with his interests—in motors, books, golf.

(3) Anything connected with his daily business.

(4) A good many things about which he says, 'I can't think why I remember so and so'.

Children remember things they learn at school, in so far as they come under these four classes. It is really as though each person had a separate 'memory' for each of these kinds of matter, and as though the best of these memories was very good, and the worst very bad, in the same person.

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[1] Cf. p. 63.

[2] Let $x$ = a date, $y$ a position upon a map.

Probably we all know why we remember 'things happening to ourselves' and 'connected with our interests'. Charles Darwin took no interest at all in Greek and Latin, which he learnt at school for seven years. At 16 he left school, and at 18 he went to Cambridge. 'In those two years I forgot, incredible as it may appear, almost everything, even to some few of the Greek letters.'[1] No one would have said then that Darwin had a 'good memory'. But the impressions left on his mind by some work done at Cambridge were 'indelible'. After more than twenty years he instantly detected a minute difference learnt at Cambridge and never met with since. This was a good memory. Darwin himself was surprised. Now this good memory was not for academic work, but for the haunts of beetles—old posts, trees, and banks—and their looks and names. For in his Cambridge days Darwin had found a pleasure, keener than any other, in collecting beetles. Interest is really the most important thing that makes us remember.

But in the first class of things remembered (No. 1 above), and also in the second and third, there is another factor which makes us remember. It is frequency. Naturally, by a mental habit, we remember easily what we do often. And we also remember things which have just happened. This factor is Recency.

Besides interest, and frequency, and recency, there must be other factors in memory, or we should not have the miscellaneous group (No. 4). Very often the explanation is that the original impression was very vivid and intense. Sometimes the vividness is due to a very strong stimulus to the senses; as one remembers the hottest house at Kew, just because it was so very hot. Sometimes the vividness is due to great emotion; one remembers waking up at night on one special occasion, because, having read a ghost story in the evening, one was so frightened. All these factors give an experience its first chance of surviving. But we have not a 'good memory' for any experiences, unless we run over them and over them in mind again and again. Each 'memory' is a mental habit, built up by practice on a basis of retentiveness, a special habit of recalling *certain* things in a *certain* connexion.

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[1] Cf. Extract 12.

Interest, frequency, recency, vividness, gather round different subjects for different people; for one, round foreign cities; for another, round his own home and village. The 'memories' of the one and the other will clearly be at their respective best on two different pieces of subject-matter. And in school each child has a varying disposition of memory for each of the subjects. One child may make nature study his own hobby, as Barbellion did; algebra may seem incomprehensible to him, history interesting and comprehensible. His 'nature study memory' may be excellent, his 'algebra memory' almost *nil*. We can understand these differences. But his history memory may likewise be exceedingly bad, and why should that be so? In nine cases out of ten it is so because he has dropped the habit of learning by heart in history. He sees the logical connexions and remembers them. But in history there are many things which need to be actually known off by rote, and this he is neglecting. In history one does best by using the logical memory to the full, and supplementing by using rote memory for exact detail. Once understanding the reason for such differences in a child's memory work, a teacher ought to see how to strengthen the weak places.

### iv. *The Transfer of Habit*

'Why can't this child remember his tables? He remembers stories so well!' This question really means: 'This child has got a habit of using his mind with the sort of events and people in stories. Can he transfer that habit to quite a different group of facts, the facts of number? Can he do this, or can he not?' This question is very important indeed, both in school and in life. How far does remembering Latin help you to remember details in business? How far does keeping your desk tidy at school help you to keep your drawers tidy at home? Why can a man reason strongly in mathematics and most foolishly in politics? If we train children to leave a room in files, do we help them to get out of a cinema without pushing? Why do children sound their *h*'s in their poetry, and in ordinary speech drop them all over the classroom? It seems hard that when you have taught your children to take notes from a history book quite well, they are so bad at geography notes; and it does seem hard that a child who notices the placing of hairs on a caterpillar to a nicety should seem incapable of noticing the placing of words in a sentence.

People have only just begun to recognize that there is a question here—the question, Can the power of a habit be transferred? It is always an important one, at every age, but it is especially so at school, in the age of stability. For the first time, then, in the junior school, discipline becomes very unlike home discipline. For the first time 'the school subjects' are separated out, and taught each by itself. Moreover, the age of stability is an age when habits formed seem to be especially strong and especially lasting.

To answer the question, people have made experiments. They have poked needles into holes, lifted weights, sorted cards, lunged with foils, listened to sounds, drawn lines, and carried on in other ways, with a sedate madness. In each case, really, the experimenter was trying to find out some one thing—for instance, whether the bodily habits got in sorting cards helped or hindered in tapping a typewriter the moment a certain letter was shown. People have experimented too with mental habits, and especially with habits of memory. For example, they have asked, Does learning poetry by heart help you to remember prose, figures, or other things unlike poetry?

The way in which such experiments are made can only be appreciated by experimenting. Every teacher ought to have tried, under the direction of Mr. Valentine.[1] It would be idle to talk about what ought to be done.

As yet, the results of the work are in this position. Some inquirers have thought that special training did give general improvement. Of these, Professor Neumann of Leipzig is the best known. In 1904 he wrote:

> There are related memory functions which can be perfected upon any material, . . . the improvement being proportionate to the degree of relationship between the two materials.

Some inquirers think that special training leads almost entirely to special improvement. Of these, Dr. Sleight of London is perhaps the best known. In 1915 he wrote:

> Specific memory training is specific in its effects. There is no

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[1] Valentine, *Experimental Psychology*.

> *general* memory function which can be developed by feeding it upon any one material.
>
> Factors such as attention and imagery are not capable of general development . . . by a one-sided training. . . . Attention to arithmetic may increase without . . . any . . . influence upon . . . attention to good manners or the names of streets.[1]

Dr. Sleight does not mean to deny what we are all familiar with—that we do transfer the power of habit sometimes, under some conditions, from one activity to another. What he does say is, that this transfer only takes place in certain definite circumstances. As laid bare by experiment, these are three :

First, obviously, transfer takes place when there is a real likeness in the actual matter learnt.

Secondly, there are certain habits which we use in all our learning, whatever the subject-matter. For instance, we are practising visualizing whenever we learn from a page, whatever the matter be. Whenever we repeat things, no matter what, we tend to arrange them rhythmically to the ear. Visualization and rhythm are supposed to be two things which are constantly improving, as we work, in various ways.

Thirdly, trained mental or bodily power is transferred from one affair to another, when the doer discovers in the two affairs some likeness which lets him regard them both as one. This is where the teacher can help children. The common element in two positions is often hard to see. A child of 8 was taught to sound her *h*'s definitely in saying two little poems ; but this training did not affect her ordinary speech at all. Then her teacher began to correct her ordinary speech quite carefully. Then I think it struck the child that saying poetry and talking were really the same.

Children see each activity, each occasion, as a thing by itself.[2] To help them, one must make the common element as striking as possible. We do not always do this. We train children to march out of a classroom in files ; but they do not form files unless they are given the exact setting to which they are accustomed, for without this stimulus the habit is not set working. Consequently, they crowd in at the school gates, rough, boisterous, and foolish. If we taught them habits of careful movement among other children moving freely, they might be able to apply classroom training to the cinema and the shop. There would be more likeness between the class and the world.

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[1] Sleight, *Educational Values and Methods*, p. 72.

[2] Cf. p. 35.

Until classroom discipline produces occasions more like those of the world, and until we train habits applicable to both, we shall still be almost knocked down in the playground by the child who whispers ''Scuse me' perpetually in the classroom. Moreover, we must not only let there be a likeness, but be sure the children see it. It will have occurred to the reader that transfer of habitual power only occurs where, consciously or unconsciously, to mind or body, two situations are just alike in the one essential point.[1]

### v. *Thought*

It is very early in life that a child begins to struggle with difficulties, and tries vaguely to deal with them. At first he does so by putting them out of his mind (see p. 63). We have seen how he learns to 'repress' some of his desires, and how, later on, he learns to draw energy from repressed desires, and uses it to get a satisfaction which he can have, in place of an unattainable one. In learning to do this, he begins to think. This great change from repression to thinking is made so early in life that people have not perceived it, and have given their attention to polishing the later thinking process. And many responsible people have made one great mistake with little children. They have bidden them repress, where they should have helped them to inquire. They have suppressed questions which were the beginnings of real thought, perhaps of the earliest long inquiries which the child wished to make (see p. 59). No greater harm can be done to a child than this. For thinking cannot be unfettered when the thinker has been taught that he must not think about certain things. It is a poison laid at the root of intellectual life.

The question was, who had murdered Mme and Mlle L'Espanaye? They had been killed in their bedroom, when people were actually upon the stairs outside.

If it had not been for M. Dupin, the secret would never have been found out. It is to one small link in the chain of

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[1] This is an Irish way of saying there is no *transfer* at all.

M. Dupin's work that I want to direct your attention. Dupin has already dealt with certain points in the evidence. He continues :

> Let us . . . transport ourselves, in fancy, to the bedchamber. What shall we first seek there ? The means of egress employed by the murderers. Mme and Mlle L'Espanaye were not destroyed by spirits. The doers of the deed were material, and escaped materially. Then how ? Let us examine, each by each, the possible means of egress.
>
> The police had laid bare the floors, the ceilings, the masonry of the walls in every direction. No *secret* issues could have escaped their vigilance. . . . There were, then, no secret issues. Both doors leading from the rooms into the passage were securely locked, with the keys inside. Let us turn to the chimneys. These . . . will not admit . . . the body of a large cat ! The impossibility of egress by the means already stated being thus absolute, we are reduced to the windows. Through those of the front room no one could have escaped without notice from the crowd in the street. The murderers must have passed, then, through those of the back room. Now, brought to this conclusion in so unequivocal a manner as we are, it is not our part, as reasoners, to reject it on account of apparent impossibilities. It is only left for us to prove that these apparent 'impossibilities' are, in reality, not such.
>
> There are two windows in the chamber. One . . . is unobstructed by furniture. . . . The lower portion of the other is hidden from view by the head of the unwieldy bedstead. . . . The former was found securely fastened from within . . . (also) a large gimlet-hole had been pierced in its frame to the left, and a very stout nail was found fitted therein nearly to the head. Upon examining the other window a similar nail was seen similarly fitted in it, and a vigorous attempt to raise this sash failed also. The police were now entirely satisfied that egress had not been in these directions. And therefore it was thought a matter of supererogation to withdraw the nails and open the windows.
>
> . . . I proceeded to think thus :
>
> The murderers did escape from one of these windows. . . . Yet the sashes were fastened. They must, then, have the power of fastening themselves. I stepped to the unobstructed casement, and withdrew the nail with some difficulty. A careful search soon brought to light the hidden spring.
>
> I now replaced the nail and regarded it attentively. A person passing out through the window might have reclosed it, and the spring would have caught, but the nail could not have been replaced. The conclusion was plain, and again narrowed my field of investigation.
>
> The assassins must have escaped through the other window. . . . There must be found a difference between the nails. Getting upon the sacking of the bedstead, . . . I now looked at the nail. . . . 'There must be something wrong', I said, 'about the nail.' I touched it, and the head, with about a quarter of an inch of the shank, came

off in my fingers. . . . I replaced this head portion, . . . and, . . . pressing the spring, I gently raised the sash for a few inches. The head went up with it. . . . I closed the window, and the semblance of the whole nail was again perfect.

The riddle, so far, was now unriddled. The assassin had escaped through the window which looked upon the bed.

This passage is not only part of an interesting tale. It has an interest of its own. It is the work of Edgar Allan Poe, a beautifully precise thinker. Long before Sherlock Holmes, he was writing 'Sherlock Holmes' stories, of which this, 'The Murders in the Rue Morgue', is one. He had discovered that a bare piece of thinking, without beauty or passion, fascinates readers.[1] We can see why.

Read the passage carefully, and mark any main stages in it. Two are very clear. The beginning is a question, and the end an answer. This answer expresses a belief.

Between the question and the answer lie many suggested answers and much argument on them. This second stage is less clear, but it is there.

Stage I. The question, 'What shall we first seek there? The means of egress employed by the murderers.'

Dupin 'transports himself in fancy to the bedchamber', and asks himself, What shall we first seek? because his feeling that there is something to be unravelled there is, as yet, vague. The vague sense of difficulty changes into the precise question (for the second sentence is really a question), 'How did the murderers get out?'

The first stage amounts then really to two—a vague difficulty; a defining of the difficulty.

Stage II. Dupin's mind answers the question, quick as light. He answers it not once but many times. 'They were spirits, and got out anyhow; they were human; they got out by 'a secret issue', in the floor, the ceiling, or the walls; by either door, by the chimneys, by either of the two windows of the front room or of the back room. As Dupin says, he must examine each of these. Indeed he must. What a fertile, quick mind he has. To him, suggestions come quickly; to many people, slowly; to some, irregularly—first one, then very slowly another, then several.

The first suggestion was spirits. Dupin dismisses this straightway, because all his beliefs about life are false if this suggestion is true. He accepts suggestion 2, that the murderers 'were flesh and blood'. He does so without argument or proof, because all his beliefs about life are false if the murderers are not. How, then, did they get out? Suggestion 3 (secret issues), he remembers, is already disproved by experiment—the policeman's experiment of probing walls, floors, and ceilings. Suggestions 4 and 5 (doors and chimneys) do not need experiment, for the evidence given is quite final against them.

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[1] Cf. Extract 12.

So far, how have the suggestions been dealt with? Either by experiment or by reasoning out the results, if the suggestion were accepted, and comparing these results with the actual facts.

Suggestion 6 (by the windows) is worked out in both ways. The windows might be the exit, but they appear to be shut from the inside. The difficulty is, then, can windows be fastened, and fastened on the inside, by a person on the outside? This difficulty is met by a suggestion. 'If they fasten with a spring, they could fasten themselves by their own weight as they come down. Is there a spring? Experiment.' He experiments, and finds the spring. Thus the experiment confirms the last suggestion into a belief, and shatters the original belief that the windows had been fastened all the time. This is a little act of thinking, complete in itself, within the larger act of thinking which deals with the whole question, How did the murderers get out?

The stages in this little piece are: clear definition of the difficulty, suggestion of a solution, experiment, acceptance of the suggestion. These stages can also be found in the next piece of thought, where the problem is, How could the windows, being *nailed* down, ever have been opened at all?

The stages just mentioned are the parts of a typical complete act of thought. We only *think*, in the strict sense of the word, when something strikes us as a riddle, and we think on until 'the riddle is unriddled'. To find the solution makes us happy. Though in life we cannot often find the solution, an act of thought is not really complete without its end—the acceptance of a belief.

To find out what thinking was, has given thinkers the greatest trouble from of old. Some failed to see that one thinks because one really wants and desires to find out something,[1] and so that one is happy thinking; others failed to see that reasoning is not the whole of thought, but a part, like the finding of suggestions or the seeing problems. It is of immense importance to grasp the process as a whole, but we could never have done so had it not been for the very clear and adequate account given by Professor Dewey, of Columbia University, U.S.A., in his book, *How We Think*—a book which alone would have made a reputation. For a long time people used to say that little children could not think, and they talked of an 'age of reason', beginning at 7 or 8, some said, and others said at 13 or 14. But little children are thinkers. M. (2½ years) wanted J.'s piece of chocolate. 'Will Jimmy give me his chocolate?' 'No.' 'Shall I put Jimmy's into his mouth?' This was a familiar game, and Jimmy played it according to the rules. He shut his eyes. M. bit the chocolate in half, ate half herself, and put half into Jimmy's mouth. J.: 'This is a very small chocolate.' M. said nothing. But every part of a typical act of thought was involved in what she did. In the following sketch, also, the little child of 2 or 3 is shown as a thinker, performing each part of the process:

> How is the child to find the right place for each of the little cylinders which he has mixed upon the table? He first makes trials. . . . He places a cylinder which is too large for the hole . . . then, changing its place, he tries others until the cylinder goes in. Again, the cylinder may slip too easily into a hole far too big for it. . . . It has taken a place which belongs to a larger cylinder. So one cylinder . . . will be left without a place. . . . Here the child cannot help seeing his mistake in a concrete form. He is perplexed. His little mind is faced with a problem which interests him intensely. Before, all the cylinders fitted; now, there is one which will not fit. The little one stops, frowning, deep in thought. He begins to feel the little buttons, and finds that some of the cylinders have too much room. He thinks that perhaps they are out of their right place, and tries to replace them correctly. He repeats the process again and again, and finally he succeeds. Then it is that he breaks into a smile of triumph.[2]

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[1] Cf. Mill, *Autobiography*. I do not believe that any . . . teaching was ever more thorough than the mode in which logic and political economy were taught me by my father. Striving, even in an exaggerated degree, to call forth the activity of my faculties by making me find out everything for myself, he gave his explanations not before but after I had felt the full force of the difficulties, and not only gave me an accurate knowledge of those two great subjects, but made me a thinker on both.

[2] Dr. Montessori's own *Handbook*, p. 33.

Mme Montessori's apparatus trains children admirably in real thinking. We should not expect little children to excel in perseverance through prolonged difficulties. But Anna pursued her main problem for more than six months,[1] and 'the son' pursued his investigation for as long,[2] and ended it with an experiment of appalling boldness indeed. There may be more children who investigate than we think.

Of course children do not think as accurately and as consciously as trained thinkers. They jump to conclusions without examining the evidence; they accept evidence which is no evidence, and they are ignorant of things which might be evidence. Besides, childish thinking differs from educated thinking in two main ways.

Even in a new thing we always recognize some part at least as akin to something we have known before. We see a red pen, a blue pen, and a pair of scissors, and say instantly, 'There are three things'. Under this simple judgement lies a vast amount of work. (It is so familiar to us that it passes in a flash, and we are not aware of it.) What we have done is: we have neglected everything, in each object, except its being one thing, one whole; its quality of oneness, of unity. This 'taking away' of all qualities but one is called abstraction. Next, we have re-combined these three separate wholes into one fresh whole, a three group. Groups or classes like this—six groups, ten groups, brown groups, funny groups—are so established in the mature mind that I can put three people or three hats or three elephants into my three group instantaneously. Such classes have been built up in our minds by our past thinking. We use many past judgements in our new work.

But how does a red pen, a blue pen, and a pair of scissors appear to a child? Perhaps he sees them as a whole vague collection, whose parts he does not distinguish. Then he calls them 'all sorts of things'; 'hundreds and hundreds of things'. He has only got as far as seeing that there is manyness there.

On the other hand, often he sees them as a red pen with black marks on it, a nice shiny blue pen, and the nursery scissors with a tape-loop—the scissors that he covets. He sees each individual thing very clearly, but he does not combine them at all into a whole.

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[1] Extract 5.

[2] Extract 6.

If he is to call them ' three ', he has to distinguish the three single things, to neglect all their qualities except the ' oneness ' of each, and to group three ' onenesses ' into a new mental whole, a ' three-group '. Many children do this difficult process at 2 or 3 years of age. Some children are very quick in dealing with this special abstracting which leads to number. Others are quicker in abstracting other qualities common to a group of objects. One little child, not quite 2, was shown a nursery picture of a soldier tumbling head first off his horse. She looked up to a picture of the Crucifixion of St. Peter, head downwards, and said, ' Look, gentleman fell off his ladder '. To her, neglecting all differences, the ' fell off ' position was the link between the two.

But this seeing likenesses, and classifying, is a very long learning, for our life is so varied, it offers new things perpetually. Every day, regular as its routine appears, is quite novel to the child's eye. And many important likenesses are really very hard to see. For instance, to a child who cannot read or write, one piece of paper is very like another ; yet really one may be worthless and the other a Bradbury. Grown-up people have learnt to see the likeness between things and situations which are very different superficially. But little children see each situation by itself as it comes. So that when we say to a child, ' Don't walk on the paint ', we mean, you must not walk on the paint, to-day, or to-morrow, or any day, whether I am there or not ' ; but the child does not hear it so. To him the particular circumstances make each case a thing by itself, marked off from everything else. Grandmamma tells him not to walk on the paint on Monday ; but how different it is on Tuesday, when Grandmamma is not there, and he has just seen an aeroplane overhead.

The first step made by very little children seems to be to identify the command with the person who gives it, and to think that the command is valid if that person is there. A child (2½ years) ate a piece of chocolate of her cousin's. She said, ' It doesn't matter, 'cos Auntie 's out, and she won't know '. She said this quite innocently to a grown-up person, apparently with no plan of deceit. Children of this age often argue thus, because they are only beginning to understand a general command at all, or rather, they are only just beginning to think in that way. Father Tyrrell seems to remember this process when he says:

> Before my fourth birthday I discerned clearly between bidden and forbidden, between praise-provoking and anger-provoking acts, but now (after it), first, I seemed to have a vague sense of right and wrong.[1]

But about 7 years old he felt another change:

> Previously there was the choice of good and bad acts ending with themselves, now it was a choice of acts . . . entailing a . . . principle of action. Formerly it was a question of this lie; now of lying.[2]

This change is due, partly at least, to the growing power of thought which has learnt to answer the question: Does to-day's act come under yesterday's command?

In a second way childish thinking is unlike that of adults. For children tend to be set thinking by problems different from those that awaken grown-up minds. They 'think' about the things that interest them—not the things that interest us. If some one said, 'Children think about interesting things', another might answer, 'Interesting? To whom? To us or to them?' In different mouths 'interest' means different things. Until we know what interest is, in its essence, we can form no forecast of what will interest a particular child.

### vi. *Interest*

'Interest is the outgoing of activity . . . round some object which seems a means to an end.'[3] We can see this is so, in such a case as that of Darwin. In 1831, Darwin was 22 years old, just leaving Cambridge. He sailed as a naturalist on H.M.S. *Beagle,* which was commissioned to South America on a geographical survey. Darwin's work was to investigate the natural history and geology of the places visited, Rio, Patagonia, Tierra del Fuego, and to make full records.

> Looking backwards I can now perceive how my love for science gradually preponderated over every other taste. During the first two years my old passion for shooting survived . . . and I shot, myself, all the birds and animals for my collection, but gradually I gave up my gun more and more, and finally altogether, to my servant, as shooting interfered with my work, . . . especially with making out the geological structure of a country. I discovered, though unconsciously and insensibly, that the pleasure of observing

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[1] *Life,* i. 21. [2] Ibid., p. 37. [3] Dewey, *Educational Essays.*

and reasoning is a much greater one than that of skill or sport. . . . Everything about which I thought or read was made to bear directly on what I had seen or was likely to see; and this habit of mind continued during the five years of the voyage.' 'As far as I can judge of myself, I worked from the mere pleasure of investigation, and from my strong desire to add a few facts to the great mass . . . in Natural Science. But I was also ambitious to take a fair place among scientific men.[1]

This account shows clearly how 'interest gathers round' those things which help a man towards his purpose, and are means to his end. But Darwin's is a very pure, very adult interest. Shall we be able to apply the same definition to interest in children's lives?

There are three strands in Darwin's interest in science: 'the mere pleasure of investigating'; 'the desire to work for science'; and the personal ambition for a reputation. The last is quite simple. It is a frank sentiment about self;[2] a clear case of means to ends. Let us go back to the earlier history of the other two strands.

1. The pleasure in investigating is, to see something gradually coming out and developing from something else. Often a long and difficult day's survey only led to the establishment of some tiny point, and many such points had to be made before Darwin could suggest any particle of theory. Yet distant as the end was, each step towards it was agreeable. This 'pleasure in investigating' was no new experience to Darwin. Even in his boyhood he felt 'delight' merely in understanding Euclid's propositions, and 'the principle of the vernier of a barometer'. He felt the mere pleasure of understanding something, as Poe felt it. Anything which gave him this pleasure interested him in his youth; that was the time when he read Shakespeare and Scott, whom later on he could not read. By the time he was 22 he tried habitually to construe the world into some sort of intelligibility. There was something native in his mind in which this pleasure originated.

Most children feel this pleasure, which arises from their instinctive emotion of wonder. Most children like to think about anything which lets them 'get somewhere' and find some ending. It is often enough to put a thing to them intelligibly, to get their attention. Few minds can resist the pleasure of understanding. The things to which attention is impossible are those that are finished, that show no guess or experiment, and lead to no suggestion or proof. Had Darwin's schooling allowed him to 'think' about literature, it might not have been simply 'a blank' to him.

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[1] *Life and Letters of C. Darwin*, 1887, i. 63 and 65.

[2] Section II.

2. 'The desire to add to our knowledge of nature.'

What early experiences originally turned Darwin's affection to Nature cannot be known, for Darwin himself had forgotten. By the eighth birthday, 'my taste for Natural History was well developed'. He remembered the pleasure he had at 10 years old in finding a rare beetle and in watching the ways of birds. Not until his last year at Cambridge was his love of Nature wedded to his passion for understanding things. He read Humboldt's scientific *Travels*; he longed to travel, to collect knowledge, to increase the store of facts. But the really clear union of the two desires only came about very shortly before the offer of the post on the *Beagle*. On a definite occasion he 'realized that science consists in grouping facts so that general laws or conclusions may be drawn from them'. In this thought, the collection of facts becomes the way in which one can reach an understanding.

Long before this, his love of natural things had been reinforced by the instinct of collecting, which was strong in him.

> By (my) eighth birthday . . . I tried to make out the names of plants, and collected all sorts of things, shells, seals, franks, coins, and minerals.[1]

At 10, he wanted to collect insects, and collected birds' eggs; at 15 he collected minerals; at 19, beetles. At 8 he collected for the sake of doing so; at 15, to name as many specimens as possible; at 19, to classify, rather more minutely, though, he says, not accurately yet.

Thus the collecting side of the interest existed in a simple, marked, instructive way, at 8 years old. At 10, Darwin's interests were in collecting stones, watching beetles and birds, and collecting birds' eggs, reading all sorts of books, and 'understanding' all sorts of things, fishing, and running and riding out of doors. Each one of these things was a purpose worth pursuing, because it was full of pleasure in itself, and so worth repeating. These purposes were not the same as his purposes at 22. But the definition of interest applies to his childish interest, as well as to his later interest. All his true 'interests' were connected with his own real self's aims. His 'work'—his schooling at Shrewsbury,[1] his medical studies at Edinburgh, his degree-work at Cambridge—did not appeal to his curiosity, nor to his desire to understand, nor did it seem to him the means to any purpose of his own, either at the moment or in his probable future. So he took no interest in it. A teacher must feel how a boy of Darwin's make might have been animated by intelligible work at school.

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[1] *Life and Letters of C. Darwin*, p. 33.

The more we study cases, the more do we find it true that a child's interests are really like our own, in so far as they are outgoings of activity to something that can be used for a purpose in his mind.[2]

But naturally we find differences too. 'A little child's interest can so easily be diverted!' A little child's purpose does not look very far ahead. It simply aims at the instant repetition of some pleasant feeling.[3] The child's interest lies in anything which will secure this. We can see something of this in Darwin's history. At 8, anything which could be collected served to arouse the pleasant feelings of collectorship. 'Purpose' in early life means nothing but sensory and emotional gratification.

### vii. *Change of Interest*

Darwin's interests move, 'like a great artist, from multiplicity to unity'. His story ends with one interest, which is always there; it is Darwin's life, the greater part of his self. Science became to Darwin what political economy was to Mill, and religion to Tyrrell. It governed his life, almost absolutely. For geology, Darwin gave up the 'passion' of his Cambridge days—shooting—and reading, which had been something of a passion in his boyhood. He reduced his life to a single devotion to scientific work. Afterwards, he was rather sorry that the rule of a purpose had been so absolute. He regretted Shakespeare.

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[1] See Extract 10.

[2] The effect, when the purpose of the work is never the purpose of the worker, is shown by Extract 13 throughout.

[3] Section II. iii.

This movement towards more fixed purposes takes place as children grow up and boys and girls become men and women. Older people have arranged and valued their own aims, because they have tested things, and they see which things work and which do not. They set some purposes before others, and, first of all, those in which self is most deeply implicated. Such purposes are in one's mind oftener than others; they are there in disguise more often than one knows. They prevail because of the weight of emotion and habit behind them—weight gathered in the experiences of years. Such frequent, massive purposes exist in all normal adult minds.

Secondly, older people take aim at a longer range than children do. They have the patience, the planning power, and the persisting power to work to a remote end, whereas a child's purpose is often reached by one act, or by a few acts.

Thus children have ground to cover. Adult purposes, and the adult preparation of means, and adult expectation of ends, misfit children. Darwin himself chose the pursuit of one distant end when he was ready for it. Mill's father chose a similar purpose for his son, who was willing but unripe; and Gosse's father imposed one on his little rebellious child, long before time.

The process ought to go on naturally. And, in fact, children seem to show definite changes in interest at certain ages. At about 7 a change begins, and it is often established by 8—it is the transit into the age of stability. It was at about 8 that Father Tyrrell[1] came into his great interest in making things. It was an absorbing interest in finding out what tools and materials could do. When Alfred Wallace[2] was about the same age, his elder brother allowed him to join him in his pet handicrafts; and Alfred worked away until he was about 14, when his brother left home, and he took to reading. These two cases are typical, and may be compared with 'Nine Years Old' Alice.[3] In all three there is the same care to get exactly the right means, and satisfaction in using them. This is a very strong pleasure. A lady said she wondered why she used to love writing so when she was 10. She remembered as one of the acutest pleasures of her schooldays the sight of the board, covered with writing to be copied, the clean white paper, the new nib, the 'feel' of the thick down-strokes and fine up-strokes, as she wrote the heading, 'The Starfish'. She said she had never lived through a more complete happiness. This is why children of this age like the repetition of a simple task, which we should think drudgery. This is why they will work away even at spelling lists, and copying, and tables. This is why Professor Dewey calls the age of stability the age of technique.

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[1] See Extract 9.

[2] See Extract 7.

[3] See above, Section II. iii.

Secondly, children of 9 and 10 have a far greater power of working for a more remote end than children of 4 and 5. One sees this when one watches them at play.[1] One sees it, too, in the recollections of Alfred Wallace, who collected cherry-stones in cherry season, as he says, to make into chains in winter. Children of 9 and 10 enjoy the preparations, and love to 'get it right'. They will often take an astonishing amount of trouble for an end that seems futile to us. Their criticism of means has become very sharp, but their ends are not yet our ends.

Thirdly, in the age of stability children often lay great stress on 'realness', as Alice did.[2] They have accumulated judgements; they have tested theories; they have a new bodily skill, and accurate vision. All these give a much greater power of using things, doing things, and judging things in the ordinary way of the world, than a child has had before. He feels powerful and pleased, in the real world, as he formerly felt powerful and pleased among fantasies.

Lastly, George Tyrrell, Alfred Wallace, and 'Alice' show one more characteristic. They all like a 'real' visible and tangible result—a catapult, a cherry-stone chain, a doll's frock washed, starched, and ironed. The aim is practical, and also rather distant; there is rather a change from earlier days, although the purpose is not yet 'practical' with a grown-up practicalness.

The 'realness' in which children of 9 and 10 are interested is a realness of simple outward things, not of inward meanings. Interest in meanings, in laws, in generalizations, is often the mark of mental adolescence.

A change of interest is a symptom; it is a symptom of a change of purpose. This explains why children's interests change. It explains why children of different ages are set thinking by problems of different kinds. It is upon this idea that valuable modern schools and school organizations have been built up.

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[1] See Section II. iii.

[2] Ibid.

### viii. *Attention*

When your mind goes out to a thing of its own motion and interest, you are attending. It is the natural attitude of your mind to something that interests you. Such attention is called spontaneous attention. Every one is equally familiar with ' voluntary attention '. Every one has had to accomplish a wearisome task, and to bring the mind back to it, again, and again, and again, for it was slipping away every few seconds. People say that voluntary attention is not connected with interest ; it is associated, they say, just with what is uninteresting. But that is the important point. Voluntary attention is the attention which we learn to give to dull things, for the sake of an interest which they serve.

In school, where we are always asking for attention, we need to remember always the connexion of attention and interest. Because people have forgotten this connexion, they have mishandled children's attention.

The ordinary time-tables of elementary schools do great harm to children's interest and attention. Lessons of thirty or forty-five minutes succeed one another through the day. We expect fifty minds to change from arithmetic to English in a minute and at the same minute. Thus we tend to break up the natural lengths and depths of attention. A far more likely way to give attention time to exercise itself would be to allow long periods of private study, broken by a few lessons at fixed times.[1]

Moreover, we have no faith in the inherent power of the great ordinary subjects to interest children, and so we teach them in difficult or perfunctory ways. Yet no one is more easily interested than a child. He does not require anything peculiar ; he is ready to like reading and writing and tables, taught in a way in which he can join in.

When people go into school, and see bored children fidgeting over unsuitable work, they draw false deductions about attention. How often has it been said that little children cannot attend for more than ten or twenty minutes! There is one grain of truth in this opinion; little children cannot follow abstract work for very long. But there is utter falsity in it too. Little children can attend to something that interests them for long spaces of time, with successive waves of attention. To mention only one example, Mme Montessori has proved this over and over again.

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[1] In most districts, among elementary schools a few schools are now working on this plan.

Attention has not to be created, but it has to be trained. Like most other things, it needs to be made into a habit. The best way of doing this is by training a child to carry a thing right through to the end. A child will attend to clay. Let him make beads or balls at his own slow pace. Let him pierce a hole in the bead, decorate it, get it baked, thread it, and wear it.[1] But we throw away his work and attention when we knead up the beads of all the children into the hideous class-block of plasticine again.

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[1] 'The completion of the work should be the aim always kept in view.' Dr. Montessori's own *Handbook*, p. 30.

# SECTION V

## CHILDREN FROM 12 TO 16 YEARS

### TABLES SHOWING AVERAGE HEIGHT AND WEIGHT

ENGLISH GIRLS, 1883 (*Anthrop. Comm.*)

| *Age.*<br>*years.* | *Average height.*<br>*in.* | *Average weight.*<br>*lb.* |
|---|---|---|
| 12 | 55·66 | 76·4 |
| 13 | 57·77 | 87 |
| 14 | 59·8 | 96·7 |
| 15 | 60·93 | 104·8 |
| 16 | 61·75 | 112·7 |
| 17 | 62·52 | 114·9 |
| 18 | 62·64 | 117·7 |

ENGLISH BOYS, 1883 (*Anthrop. Comm.*)

| *Age.*<br>*years.* | *Average height.*<br>*in.* | *Average weight.*<br>*lb.* |
|---|---|---|
| 12 | 54·99 | 76·7 |
| 13 | 56·91 | 82·6 |
| 14 | 59·33 | 92 |
| 15 | 62·24 | 102·7 |
| 16 | 64·31 | 119 |
| 17 | 66·24 | 130·9 |
| 18 | 66·96 | 137·4 |

### i. *Two Different Types of Adolescence*

UNTIL the changes of this period are made, the boy or girl has been living in a world which is not ours. Now for the first time things begin to take the meanings which they have for the adult; and as the adolescents make this change, they begin to differ from one another even more markedly than they have done until now.

Annie had lived all her life in a little Poor Law Home. But at 16, a place in service was found for her, and an outfit was prepared. She had neither choice in it, nor exertion, and this suited her very well, for she was and always had been sluggish. She had gone through seven years of schooling as dumb as an animal. Annie was interested in her own departure from the Home. She was quite excited by her hideous and useless outfit. As she neither read, thought, nor went to the pictures, she got her greatest pleasure from putting on new clothes. Soon after her fourteenth birthday, she had found another interest. She had set her cap at a boy visitor. But this was quickly stopped. So clothes remained the great interest of her life. But now Annie was tired of the little house from which she never got away, and tired, too, of the Matron's orders, although she got on with her quite well, and usually tried hard to please her. With frizzed hair and inexpressive face, red-cheeked and thickset, she went off to service.

Annie lost her first place at the end of a month. Since then she has lost several. She behaves just like a child. She works well when the work is new, and then grows dirty and lazy. She will not do as she is told. Sometimes she tells her mistress that 'she doesn't care; something seems to come over her'. Her mistress says she thinks a very great deal of herself. Her only steady aim is to get new clothes in greens and pinks, and pearl bead necklaces.

A boy of the same age contrasts with her. Since his last birthday he had written a sonata, a quartette, and a tragedy. The plot of the tragedy was founded on that of *Hamlet*; its hero 'resembled equally Hamlet and Harry Hotspur'. This boy had shivered with delight when violins sounded fifths, and when the oboe, tuning up, breathed a long A. He was a truant from school, and did no schoolwork, but he studied the orchestral scores of Haydn and of Beethoven, who was then generally believed to be mad. Not long after his sixteenth birthday, he went to hear *Fidelio*. The part of Fidelio was sung by the most ardent actress of that day, then young and beautiful. When the curtain had fallen, the boy rushed away to write to the singer. He said that he had now found the true meaning of his life. If ever she heard of him, in the art world of the future, it was she that had made him in that one evening what he was fated to become.

> I left this note at her hotel, and rushed madly out into the night.

He tried to write poetry, but he thought his work such rubbish that he despaired.

Just then, revolution broke out in his country. The year was a year of revolutions. The Constitution was changed; in the town, the poor swarmed out to attack factories and shops. The students of the University became the Civic Guard. Thus they represented not only Freedom and Youth, but Power, and the New Constitution. All these events so heightened his feelings towards the students that he joined them as a volunteer, lived with them night and day, and made friends with the fiercest and the wildest. He thought himself miserable because he was not really a student. He was enrolled as one just before he was 17, and so he realized one aim.

But his other ambition? The praise of the world of art? This was the ambition for which he lived after his student days, the cause for which he starved for two years in Paris, the work which was only completed when London and Paris gradually recognized the beauty of *Tannhäuser*, *Lohengrin*, *Tristan und Isolde*.

Adolescence varies within limits like these. In reading about adolescence, one must remember this. But even in two such different cases there are likenesses; the stupid and the gifted both follow the common trend. There are two things which stand out. One is the slight peeping of sex emotion. The other is the stirring of self-emotion.

## ii. *Emotions of Self*

### (*a*) *Sex*

During adolescence, the organs of sex develop to their mature forms and uses. They develop most strongly from the average age of 13–15 years in the female, and of 14–16 years in the male. In children of the elementary school, especially in towns, the onset of adolescence tends to be early. Girls sometimes begin to menstruate as early as 11, and not infrequently at 12.

Along with this bodily development, the sex instinct begins to make itself felt in action, and the sex emotion begins to colour thought, and shape it, and to take its final form.

The instinct and the emotion together undergo two changes. Like the sex organs, they have to reach their mature form and uses. Until this time, the sex instinct has probably been very hidden in its workings.[1] But it has meant to the child something connected with its self. Now the instinct comes with a full flood of emotion, and sweeps the adolescent right out of himself, towards another's self. At its completest, it is the sex instinct which leads to the deepest experience of being another's self, and of transcending one's own. Secondly, the interest of the adolescent is carried over into a person of the opposite sex. Often a schoolgirl has been fascinated by a woman, a schoolboy by a man. But now in a healthy development the change is made, and the opposite sex asserts its natural power.

These two great changes take some years to accomplish. Often, one shoots ahead of the other. The interest in another person grows stronger long before the transfer of interest to the other sex. \Then comes the age of adorations. The craze in itself is a state of great silliness, misbegotten of too unmixed a male or female society. But the force of feeling behind it is derived from the ripening sex emotion. Even after the transfer of interest, the sex instinct only ripens gradually. During adolescence people are trying their emotions, now here, now there. But for ordinary English people, the completion of love is not the work of early adolescence at all. It is the work of the latest adolescence or early maturity. This is partly why the age of marriage has tended to rise since marriage became a matter of individual choice. In 1838 Lord Melbourne said to Queen Victoria: 'Girls begin to be nervous when they are past 19, and think they'll never marry if they are turned 20.'[2]

Whether the sex instinct is so powerful that it calls all other emotions into keener life we do not know. What we do know is, that it gives rise to immense energy, to a strength of emotion, and an eagerness, which can be used not only for sex experiences, but for many other kinds of experience.[3] It is this mass of emotion which pours along all the channels of interests. It is this mass of emotion which makes adolescence a time of new emotional delights which are like inspirations and frenzies, and new intellectual discoveries which are like revelations. For the new emotion, not yet drawn to its final goal, can be associated with any idea and any interest. To this process of transfer has been given the strange name of Sublimation. And it is this which gives the developing sex instinct the greater part of its importance to teachers. It is the Nile flood upon the fields. It makes possible such an increase of interest. It gives intellectual growth such rich emotional blood.

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[1] See Section II. v. It is possible that the sex instinct appears first at adolescence; but not, I think, probable.

[2] Esher, *Girlhood of Queen Victoria*, ii. 38.

[3] By the process of sublimation. See Section II. vi.

But the extent of sublimation is limited. So, too, is the pace at which the process can go. Too absolute a repression of sex life would be very unfortunate. There is sometimes danger of this repression being made when an adolescent learns the facts of sex, at a time when they seem dreadful. A girl may learn the facts, and think of herself for a second, and then say, 'No, that 's impossible'. Such an experience may lead to the repression of the most valuable energy in life.

### (*b*) *Feelings of Self*

'Sweet seventeen', said one lady to another, looking at an awkward, blushing girl; 'I think it is a dreadful age!' 'Yes, the awkward age!' At 15, Barbellion wrote:

> When I can get hold of any one interested in Natural History, I talk away in the most garrulous manner, and afterwards feel ashamed of myself for doing it.[1]

A lively boy of 16 is too shy to go into a shop alone, or to say a single word to strangers. He shies away from the simple possibility of not knowing what to say to them. But with people he knows, he is extremely chaffing, challenging, and playful. He gets excitement and elation when full-grown people come down to his level and accept his attacks, as they do in playful intercourse. George Tyrrell had a great respect for his vivid mother, who still laughed, after so many misfortunes, and who was still an eager talker. He argued with her on all possible occasions, and he did this for the pleasure of taking the other side. There is no phase of aggressiveness or shyness, no awkwardness, forwardness, affectation, 'side', rebellion, that is not found in its fullest bloom among adolescents. All these things grow from one root. It is the keenness of the two main emotions of self during adolescence.

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[1] Extract 15.

Then, elation and abasement are more sensitive than any sensitive plant. They do not lead to frank selfishness, as they do in a child of 2, but to odd assumed manners and inward pains and pleasures. At 20, Barbellion writes :

> My egoism appals me. Likewise the extreme intensification of the consciousness of myself. Whenever I go down High Street on market day, my self-consciousness magnifies my proportions to the size of a Gulliver . . . so that it is grievous to reflect that the townsfolk see me only as an insignificant youth who reports meetings in shorthand.

His nature was prompt to feel abasement, and all his circumstances, his sordid life, his poverty, his illness, called out the same emotion. So he had to strive for elation ; and he tried to get it out of his imagings of the world, not in real life. ' At present ambition consumes me. I can remember wondering as a child if I was a young Macaulay or Milton, and secretly deciding that I was.' Unfortunately for him, he was drawn into a world of dreams by his extreme loneliness. More happy people work out their elation and abasement in intercourse. Intercourse is always a struggle ; and victories in talk and conduct are very real victories. Young men and women feel this very strongly ; it is for the emotion involved that they argue. It is through these emotions of elation and abasement that little children begin to have knowledge of self.[1] To boys and girls of 14 and 15, the strength of these feelings suggest bewildering questions about themselves and the world. A girl of 14 said to an older friend, ' I do wish I could know whether I'm good or naughty ! ' Her new feelings were carrying her away from the narrow standard of the age of stability. Then, goodness had been complete if the girl got up very early and cleaned the bird-cage before breakfast. But now she began to feel that goodness meant something quite unprecise : a whole way of thinking, applicable to everything. Barbellion, at 20, expressed the same feeling when he wrote :

> Perhaps after all (a naturalist's) is a narrow life. . . . It is all vastly entertaining to the naturalist, but it leaves the world unmoved. . . . To sum up my despondency, What's the good of such a life ? Where does it lead ? Where am I going ? Why should I work ? What means this procession of nights and days, wherein we are all seen moving along, . . . as if we had some purpose ?

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[1] Section II. vi.

During adolescence especially, it is one of the functions of the emotions of self to provoke conscious thought about the real questions of life.

### iii. *Society and Social Instincts*

At 20 Barbellion was very unhappy. He lamented being 'without any friends . . . without even any acquaintances, except my colleagues in journalism, whom I contemn'. James Mill always kept his son carefully away from other boys, because he was afraid of 'the contagion of vulgar modes of thought and feeling'. But when J. S. Mill was 16, he was a well-formed Benthamite, his father allowed him more freedom. And at once

> I formed the plan of a little society, to be formed of young men agreeing in fundamental principles . . . and meeting once a fortnight to read essays and discuss questions.

To any young Mill, any offspring of such a strenuous converser as James Mill, this must have seemed the very ideal of social life. It made John Stuart Mill happy, and he had never been youthful or sociable before.

In human nature there is an instinct which forces us together. It is the simple tendency to get together with some other living thing, and then to feel satisfied. People allude to it when they say, 'I'm not frightened if there is any one with me', or, 'I can't bear to be alone'. It is this instinct which has shaped human society in the rough, and made human lives to be lived in groups. It exists of course not only in human beings, but also in animals. It is called the herd instinct or the gregarious instinct.

No sooner do human beings come into groups under this influence than three native tendencies of our minds come into play. The first is the tendency to imitation. Imitation means the copying of movements, and it shows itself quite simply. The second is the tendency to accept suggestion. We are inclined naturally to accept opinions expressed by others, and to do so without thinking over the evidence at all. To do so is called accepting a suggestion. It is exactly this 'mode of thought' which James Mill dreaded for his son. Its power is proverbial. 'Give a dog an ill name and hang him.' To use it, makes up the art of advertisement, and a great part of the art of government.

The third tendency is the inclination to sympathy. This word does not mean exactly what 'sympathy' means in ordinary talk, namely, imagining ourselves in the position of another. Instead, it means the mere native tendency to catch emotion from those who are feeling it, as one catches an infection. Nothing makes one more frightened than the presence of some one who is frightened, as in Sir J. M. Barrie's *Mary Rose*, to feel as others are feeling without having a real cause; this is our native tendency to sympathy.

When these three tendencies have full play upon people they produce very extraordinary results, such as soldier's bravery, soldier's cowardice, rumour, public opinion, enthusiasm, revival meetings. But in ordinary life, too, the three are always at work upon us all. They produce a great deal of comedy, and they are often illustrated by the works of humourists; the force of suggestion gives the plot to *Mademoiselle Panache*, by Miss Edgeworth.[1] Like many people of her time, Miss Edgeworth understood the three tendencies very well, because she had watched social life so carefully. In this she was like a contemporary, who contrasted with her otherwise, in being a man, a Scot, religious, and poor. David Stowe invented a remarkable school system, and he founded it all upon the social instinct and tendencies. In the following passage he describes them under the name he always gave them, 'the sympathy of numbers':

> The power of the sympathy of numbers is felt every day in politics, in religion, and in vice. . . . The same holds true in the school . . . and in the playground. . There is a moral and intellectual sympathy that children feel with those of the same age which is not felt by members of a single family. . . . The boy at 12 sympathizes not with his brother at 9, and still less with his sister at 7 or 8; he naturally chooses for his companions . . . those about his own age, and makes his choice from sympathy. . . . How frequently do we find half a dozen boys collectively saying or doing something which any one of the number would disdain to do! . . . It is almost unnecessary to furnish proof of the power of the sympathy of numbers.[2]

Stowe permitted a real social life in the playground, where his children spent one-third of their time. He thought that thus he allowed what was in them to come out. What he believed, Mme Montessori believes. She too leaves a great deal of the work to imitation, suggestion, and sympathy.

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[1] In the *Parents' Assistant*.

[2] Stowe, *The Training System* (11th ed.), p. 150.

Philip[1] came to school on Jan. 17. He stood at the door crying; he would not speak to the teacher nor to the children. He sat still, neither obeying a command to himself nor to the class. He tried to take some beads away from one little child, and a picture-book from another. Dora asked him to come to the cupboard, and he would not go with her. She went away, and then he got up and went to the cupboard alone. And he took no notice of the children when they marched to music and clapped in rhythm. Next day, when the others went to the cupboard, Philip went too. On the third day he watched the other children marching, and moved his foot in time; and on the Monday of the second week he came of his own accord and marched with the others. And he began to help, for the first time. When the other children were clearing away, he too moved a little chair back to the wall.

February passed and March came. On March 21st

> Philip answered to his name. Watched Eva doing colours. Eva talked to him and Philip nodded. Seemed tired, rubbed his eyes and yawned a good deal. Eva explained what she was doing. Philip was interested, and talked to her. Helped to put the colours away. Did not join in games or marching. Had lunch. Helped to shake cloth and fold it up. Smiled all the time. Watched Ronnie build with bricks. Laughed when it fell down. . . . Given some colours. . . . Paired nine pairs correctly. Given some more; paired them correctly. Esther asked him to help put a table away, and he did so. Made a noise. Sat down, but Esther asked him to help again. He did so. Carried chair into circle for a story. Very interested; sat forward with hands on knees, listening.

At the beginning Philip was allowed to do nothing, for then he was subject to the influences that were in the room. He would not go with Dora to the cupboard, but her suggestion, the sight of the open doors, the children going to it, excited suggestion and imitation, and sent Philip to it. So, too, in his obedience. He learns to obey first an individual order to himself, and later a command to the class; but not because the teacher made a direct point of obedience. She left him to the guidance and influence of the conduct of the other children. It is so difficult not to obey imitation, suggestion, and sympathy, that she could count on the result with fair security. The life of this child illustrates the action of the three tendencies which society inevitably stimulates. It provides a case in which a child became natural and promising, for the first time, under their influence. It is only children who can give a child this particular kind of education,[1] for only they are really like-minded with him. In adolescence, too, young people must feel these influences from other young people. But then they need to feel them also blowing from the world of grown-up people.

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[1] Cf. Section II. ii.

### iv. *Thought and Change of Interest*

At about 15, many children have one strong desire. They want to find a 'self' to be, among grown-up selves, among men and among women. For the first time, the boy sees 'men' and 'women' around him. Hitherto he has only seen the 'grown-ups', the parents, the uncles and aunts, and the others, towering above him. Now he sees them with a level eye—people who were strange and powerful in his childhood.

Consequently, thinking takes a new direction. At 15, J. S. Mill began to read *Principles of Morals and Legislation*, by his father's friend, Mr. Bentham.

> Reading this book was an epoch in my life. When I laid down the last volume, I had become a different being. . . . I had now opinions, a creed, a doctrine . . the diffusion of which could be made the principal outward purpose of a life.

For the next five years, 'I had what might be called an object in life, to be a reformer of the world '.[2]

A year[3] or two before this epoch in Mill's life, John Henry Newman had passed through a similar crisis.

> When I was 15, a great change of thought took place in me. I fell under the influence of a definite creed. I believed that the inward conversion of which I was conscious would last into the next life, and that I was elected to eternal glory. I am obliged to mention, though I do it with great reluctance, another deep imagination which . . . took possession of me: viz. that it was the will of God that I should lead a single life.[4]

Acquaintances of Mill and of Newman might have been surprised had they known what problems those boys held in their minds. Both Mill and Newman were stumbling about in a world of new meanings, and they wanted new explanations. Many people can look back to similar experiences. Some can recall quite clearly the drawing back of a curtain, as it were, that had hung its misty folds between the mind of a child and the world as we know it now, and hold to be real.

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[1] Cf. Adams, *The Education of Henry Adams*. 'Till his twelfth year, nothing stuck to the mind except home impressions, and the sharpest were those of kindred children.' Cf. also Extract 10.

[2] Extract No. 14.

[3] Mill, born 1806; Newman, born 1801.

[4] Newman, *Apologia pro Vita Sua*.

Consequently, both Mill and Newman awoke to new problems. We have seen that little children think. But they think chiefly on such questions as: 'How can I get that piece of chocolate?' 'How can we make a hutch for my rabbit?' The adolescent interests himself in such problems as: 'Was Charles I right, or Oliver Cromwell?' 'What 's the proper classification of all these stones?' 'What is the law about steam?' These questions do not lead simply to an action on the case in point. They lead to the discovery of general laws, each of which covers the case in point and others as well. In adolescent minds a passion sets in for general laws which explain everything, and a love for mighty systems which embrace everything. When the law is reached, there is such a mental satisfaction, in truth and in arrangement, that the love for thinking of this sort does sometimes rise to a passion. A very common weakness of thought at 17 or 18 is that particular cases seem petty and unimportant. Minds of that age have to learn to give evidence, and the examination of evidence its proper place.

Adolescence does not put away its old problems, 'How to do it'. Life is not artificially divided. But adolescence enters more intensely than childhood did upon problems which are wider than the problems of childhood; problems solved by conclusions not only practical, but intellectual, satisfying in themselves. Such thinking, for the discovery of a new idea, has been well named reflective thinking.[1] Adolescence tends to be the age of reflective thought.

## v. *Willed Action*

As we have just seen, conduct and action take a new place in adolescent minds as things to be thought about. They involve a new responsibility. This responsibility is that which we take when we do a thing deliberately.

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[1] Dewey, *How We Think*.

What is meant by willed action[1] is shown by the following passage. Alice, a girl of 9, had a little sister, Callie; little Callie was poorly:

> 'So papa said we would keep the yellow plum for her. He told me I was not to meddle with it. I was rather vexed with papa for telling me that. . . . *I* touch Callie's plum! . . . Never, never, never!'

Next day Alice went out to bowl her hoop round the garden. Each time she passed the plum. From peeping to looking, from looking to touching, the sweet scent and ripe skin of the plum drew her on. At last

> 'I pulled it off, and down went my teeth . . into the rich, ripe golden heart. But what do you think there was inside? . . . a wasp! . . . and when my teeth went into the plum, its sting went into my lip! With a shriek I flung the plum away, and rushed into the parlour to Mamma.'

Alice was sent to lie down, and every time her mother came to give her a nice drink and a kiss

> 'I felt worse than ever. Sometimes I thought I would tell her, . . . next time . . . what a naughty wicked little girl it was she was nursing.' . . .

At last Alice heard her father come home, and go out to pick the plum. When she heard him come back, and say, in such a different voice, 'Jessie, my dear, what does this mean?' she could bear it no longer.

> 'I flung myself from my little bed, and rushed into the parlour. "Oh, Papa, I did it—I didn't mean—I'm sure I didn't mean—but something made me do it".'

. . . . . . . . . .

> 'Next day was Saturday, when I had my *2d.* to spend Mamma put the two pennies into my hand, and said, "What does my little girl think she ought to do with those pennies?" . . .
>
> 'I stood still for a while, fumbling my fingers about. I knew what Mamma meant. She meant that I ought to buy a plum for Callie. . . . But I did not like that at all, because I wanted to buy a gingerbread horse . . . and a piece of stuff. . . . The large yellow plums on the stall in the market-place were *2d.* each. . . .
>
> 'I looked at Mamma, and Mamma looked at me, and her calm, clear, grey eyes were going right down into my heart. . . . At last I said, almost in a whisper, "Yes, Mamma".'

Very, very downcast, Alice went for her walk, past the gingerbread shop, and the draper's shop, to the plum stall in the market. And when the man said cheerfully that the plums really were 2*d*. each, her heart was very heavy.

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[1] There is no such thing as 'the will' in real life. One's will is oneself, choosing. 'The will' is a general expression for willed actions, looked at by the mind, after they have happened.

> 'But, as soon as the 2*d*. was safely out of my hand, and the yellow plum safely in it, I began to be as happy as—as—well, I don't know *how* happy I felt. . . . and I kissed Papa and Mamma, and looked right straight in their faces, and I felt as if I were friends with all the world, and all the world was friends with me.'

In this story there are more decisions than one. Clearly there are three: (1) Shall Alice pick the plum or not? (2) Shall she confess or not? (3) Shall she buy another plum or not?

To answer question 3 costs Alice a long, long struggle, thought and emotion battling against thought and emotion. So, too, with the answer to no. 2. But not so with no. 1. Alice never even thinks of any arguments; the delicious look of the plum excites a desire for it; Alice rushes headlong after the desire.

Nos. 2 and 3 differ then from no. 1. For in them there is a real consideration, a deliberation, on alternative courses of action. Such consideration is one hall-mark of willed action.

No. 1 is not a willed action at all. It is an impulsive action, a simple pursuit of immediate sense pleasure, an action of a childish type. Between stimulus, desire, and action, there is no check; the moment's check—to consider, the moment of 'inhibition,' is not found in no. 1. It is found in nos. 2 and 3, and in all cases of willed action.

Nos. 2 and 3 are alike in another way. In no. 2 Alice foresees that her parents will blame her if she confesses, and if she does not she will be a liar, as well as a thief. In no. 3 she foresees that if she buys the plum she will be doing right, but that if she does not she can have a gingerbread horse and a piece of print. It is the clearness of her foresight that makes the struggle so sharp. Quite clearly she sees the possible actions, and all the good and bad they stand for. To consider two or more courses of action, foreseeing the results of each course clearly, is true deliberation.

In this story, Alice does something wrong and then she does something right. Why does she change from bad to good? This question is the cardinal one for educators. Their greatest work is to turn the choice and determination of another towards right actions. How can they do this mysterious difficult thing?

Why does Alice change from wrong to right? Because she herself calls herself a '‘naughty, wicked little girl ', instead of thinking herself too good to be warned, as she did at the beginning. Because she foreknows so well what her parents will think of her. Because she cannot bear to have such an action permanently hers, and part of her. She disowns the theft when she says, ' I didn't really mean it '. Vain disowning of an act which one has done !

Why does she buy the plum ? Not because she wants to, but because her whole relation to her mother seems to be at stake. Her mother's tender name for her, ' My little girl ', seems to say that she can be the Alice she was, and is no longer, if she buys the plum.

The first step in the change, then, is clear. Alice sees her past self in a new light, as odious—not as Alice, happy eating the delicious gingerbread, but as Alice the thief, Alice the liar, Alice the culprit before her mother. The question is now : Alice ! which of these selves will you be ?

And she chooses, and tries to become the one she chooses.

' Willed action is the choice of a course of action, after consideration of two or more courses of action, with foresight of the results of each, and acceptance of the results of the course chosen.'

But why is it the good self, and not the other, that she chooses ? How are people ever brought to choose the unpleasant alternative ?

They are brought to do so by training. Alice was 9 years old. To her, the happiness of loving her mother and being loved was the most frequent and continuous of emotions. But throughout 9 years this emotion had always been connected with ' doing right '. The two ideas, ' doing right ' and ' Mamma being pleased ', were not yet separate. They came together, bright with the same emotion of love and joy. Thus Alice's mother had brought emotions of the most persuasive power, to give all their vigour to the idea of goodness. Later, the idea of goodness by itself may become firmly bound to pleasant emotions, by all the force of association.

Secondly, other equally strong emotions are on the same side. Alice cannot feel any pleasant emotion in herself, unless she rejects the immediate sense pleasure of eating gingerbread. Alice can feel no elation, no freedom from abasement, no outburst of happiness, if she chooses to eat gingerbread. For elation draws its stimulus largely from the attitude of others[1]; and Alice's parents would certainly not give it any stimulus at all if she chose the gingerbread. She chooses the unpleasant thing because now, at 9 years old, strong pleasant emotions are bound up with the idea of goodness. All her past training has made 'goodness and happiness one' to her.

Compare with this account a second, very different in most ways. In this second passage an ageing man decides to defend his religious life by writing a book. It is an historic case and a momentous one. Yet in two cases so dissimilar the same parts are there.

In January 1864 Charles Kingsley accused Father J. H. Newman of having been untruthful, and of having encouraged other Roman Catholics to be so. Father Newman wrote :[2]

> When I first read the pamphlet of accusation, I almost despaired of meeting effectively such a heap of misrepresentations and such a vehemence of animosity. . . . I reflected, and I saw a way out of my perplexity.
>
> He asks what I *mean* ; . . . he asks about my mind ; . . . and he shall be answered—not for his sake, but for mine, for the sake of the religion which I profess, and of the priesthood in which I am unworthily included, and of my friends, and of my foes.[c]
>
> My perplexity did not last half an hour. . . . I said . . . I 'will draw out, as far as may be, the history of my mind.' . . . What I had proposed to myself in the course of half an hour, I determined on at the end of ten days. I have many difficulties. (Also) I may be accused of laying stress on little things, of being beside the mark, of going into . . . ridiculous details, of sounding my own praise, of giving scandal;[a] but this is a case above all others in which I am bound to follow my own lights. . . .
>
> It is not at all pleasant for me to be egotistical, nor to be criticized for being so. It is not pleasant to reveal to high and low . . . what has gone on within me from my earliest years.[b] But I do not like to be called to my face a liar and a knave, nor should I be doing my duty to my Faith or to my name, if I were to suffer it.[d]

As in Alice's case, a question comes first, the question : Shall I, or shall I not (answer my accusers) ?

For ten days one course of action battles against another in Newman's mind.

He sees himself as he will be if he answers. And here Newman's imagination, and all his experience of life, paint the results most painfully. He foresees himself dragged before every one's criticism; five different voices of criticism he hears;[a] he feels beforehand the pain of exposing his heart to the world.[b] Yet that same self would be one which was defending, like a man, his own honour, and the honour of his Church.[c]

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[1] Cf. p. 54.

[2] Newman, *Apologia pro Vita Sua.*

And he sees the other self he could be, suffering these accusations in silence, and 'not doing my duty to my Faith or to my name'.[d]

More than once before, Newman had done his duty, as he thought, to his Faith, with greater pain than this. 'His Faith', his Church, was his most frequent idea. It had long been associated with his strongest emotions and his strongest mental habits. Seeing the case as he did, it would have been strange had he decided otherwise.

Thus, in these two cases, there is the thinking out in two possible ways: the seeing of oneself in two possible lights; the emotion and habit clinging to one of these 'selfs'; the identifying of one's 'real and inmost self' with it. And the things which modify our ideas of ourselves are very many. Our 'selves' have a hundred hands, reaching out to all sorts of things. We take action in a way determined by 'self' in many more cases than we suspect.

There is one great difference between the two cases—the difference between maturity and immaturity.

Alice really acts upon her mother's strength. It is because her mother minds so much that Alice minds so much. Every one around her agrees with her mother. It is below the common standard that Alice has fallen. It is to the common standard that her final choice lifts her.

Newman stands alone. 'This is a case above all others in which I am bound to follow my own lights.' He knows that the world will call his answer 'an occasion of scandal'. But because *he* sees in it the duty of defending his Faith, he acts against surrounding opinion. To some people, chiefly the gifted and the ripe, this necessity sometimes comes; and when it does it leads to the highest passages of human life. 'The highest stage of conduct (is that) in which it is regulated by an ideal of conduct that enables a man to act in the way that seems to him right, regardless of praise or blame.'[1]

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[1] MacDougall, *Social Psychology*, p. 181.

## vi. *Character*

J. S. Mill says,[1]

> In reading the first pages of Bentham, . . I felt taken up to an eminence from which I could survey a vast mental domain, and see stretching out into the distance intellectual results beyond all computation. . . . The principle of utility . . . fell into its place as the keystone which held together the detached parts of my knowledge and beliefs.

To Mill, at 15, the principle of utility explained everything. It was the one purpose hidden behind all facts and not seen by him until that moment. Now, he thought, he understood men and women and the broad principle of the world. More matter-of-fact minds also feel this arrival of new meaning. Queen Victoria wrote :

> To-day is my sixteenth birthday ! How very old that sounds ! But I feel that the two years to come . . . are the most important of any almost. I now only begin to appreciate my lessons, and hope from this time on to make great progress.

Lord John Russell's diaries show a similar change. So do Barbellion's. At 13 he was quite happy 'to see the egg season so well in ', and to note that ' our goldfinch roosted at 5.30 '. At 15, ' I am thinking . . . that I am a most discontented mortal. I get fits of what I call ' What 's the good of anything mania '. I keep asking myself incessantly, ' What 's the good of going into the country naturalizing ? What's the good of studying so hard ? Where 's it going to end ? Will it lead anywhere ? ' [2] Less fortunate than Mill, Barbellion found no answer in his poverty-stricken home. He was seeking some lasting aim, and could not find it. As we have seen, Mill found one. Let us follow his development a little further.[3] At 16 he sought out young Benthamite reformers, and he also persecuted those of the unconverted whom he thought he could convert. Had we known him as a child, we might now have said, ' Young Mill is actually getting quite sociable ! What a change ! ' Wherever he could do anything to ' reform the world ', he did it, of set purpose. Nor was this so in willed action only ; he acted in little things, and things that he did not think about at all, in the manner which became a reformer of the world. When he was 20 Mill grew ill and depressed, and his visions of reform left him ; but he went on attending the Reformers' Debating Society, and speaking in the debates, to his own surprise, when he awoke to what he was doing. He says himself that he did so merely from habit. The fact is, that to choose one way always becomes a habit of mind like any other. /We fall into such a habit when we have a lasting aim ; and thus we get a kind of steadiness in one direction which enables other people to reckon on us. They call this our character. Character is habitual action in one direction, based upon careful deliberate choice of that purpose. The person who has a ruling, lasting desire and purpose has a character.

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[1] See Extract 14. [2] Extract 15. [3] Cf. Extract 14.

### vii. *Discipline*

To many people, 'discipline' means obedience, and the word recalls a stand-up fight for obedience between teacher and child. There springs to mind such a scene as this. A new teacher said to a boy of 9, 'Stand up'. He grinned, and sat still. She went up to him, and said again, 'Stand up'. A third time she said 'Stand up', and he tittered, and looked round. She gave him a sharp, strong smack. With amazement and understanding mixed on his face, he obeyed her at once. I think that in this case this treatment was right. The child was quite normal, 9 years old, rough, and accustomed to be slapped at home. He was simply asking, How far can I go with you? The teacher told him, in a language which he understood. Nor was that one slap the whole story of that teacher and that child. It was only the first word of it.

People do sometimes question the lawfulness of a child's obedience to its elders, and thoughtful people must question an idea so important. Yet I do not think that the lawfulness can be denied. Normal children must obey normal people, for the following reasons. Children for whom no nursery laws exist are not happy. They have no peace of mind. The happy children are those who know exactly what is lawful; and need bother about that no more. Normal little children expect and require law, and their interests and their natures demand it. And it would be a very serious handicap not to have experience of external law, for under external law of some sort contemporary life is lived. The grown-up person knows more than the child on some simple points, as when Nurse says, 'To-day you must put on your goloshes'. She ought to have the courage to ask for obedience in this. In so doing she is teaching the child a very important truth—that for certain things she will help him, because she is wiser than he. No times are more delightful for the elder partner, nor more wholesome for the younger, than those when the child turns and communicates by a friendly look with the person he has learnt to trust.

Lastly, by requiring that a thing shall be done, an adult influences a most important habit in the child. There is a very common bad habit of mind—that of deciding to do a thing and then not doing it. A child may resolve to stop reading, and then just read one more page, and one more page. . . . How often this happens to a child's private decisions we cannot tell. But there are just a few points in a child's life where we can perhaps help to make the habit of acting on a decision. The grown-up sees to it that, when the moment comes, the child does actually go up to bed.

Not, 'Are you going to ask for obedience ?' but, 'On what points are you going to require it ?'—this is the question, this is the real question. If we could answer it rightly, and act on the answer, the younger generation might yet be free, and grow up happy. It is here that so much reconsideration is needed.

Some ordinary cases illustrate disobedience of various sorts under present conditions. Such ordinary and normal cases must of course be tackled at once. But how ? Every case is a case by itself, and the treatment depends upon the causes of the disobedience.

Case 1. A quick-witted girl of 12 wanted to answer a question. She sprang out of her seat, and came down the aisle. The teacher told her to sit down, and she went back to her place. Two minutes later she was half-way down the aisle again.

In this case, the teacher can take away part of the difficulty. For the teacher herself was being far too slow in taking the answers ; and she was not giving an occasional difficult question to this quick-minded child. But part of the difficulty lay in the girl. To spring up, and out of one's place, are impulsive actions, produced naturally by excitement. What the girl must do is to check or inhibit the impulse so that it does not become action. She must do so, once ; and she will do it for the first time if she sees her conduct in a new light. If every one jumped up, there would be confusion. For one to jump up is to take a privilege to oneself, and this is not a sporting thing to do. A word or two between the mistress and the girl show the action in this light; and with one effort the girl stays in her seat at an exciting moment. Her will is on the right side. Nevertheless, the habit of jumping was in her, in mind and muscle; habits are not erased by one resolution. The girl only made the opposite habit after many repetitions, failures, and reminders. Time was essential.

Simple, impulsive disobedience can be treated like this.

Case 2.[1]

> The Lower Fourth, and the forms below it, were heard in the Great School, and were not trusted to prepare their lessons before coming in, but were whipped into school three-quarters of an hour before the lesson began by their respective masters, and there, scattered about on the benches, with dictionary and grammar, hammered out their twenty lines of Virgil or Euripides in the midst of Babel. The masters . . walked up and down together, or sat at their desks, reading. . . . A large empty desk stood in a corner, a four-seater, which the boys were forbidden to use. Consequently, it was usually occupied by two boys, who lay completely hid, and stole down when the master's back was turned. Tom and East[2] used even to play little ball games in it. . . . One day, as ill luck would have it, . . . the ball slipped through East's fingers, and rolled slowly down the steps, and into the middle of the school, just as the masters turned in their walk. The young delinquents watched their master march slowly down the school, . . . while all the boys in the neighbourhood of course stopped their work to look on, and not only were they ignominiously drawn out, and caned over the hand then and there, but their characters for steadiness were gone from that time. However, as they only shared the fate of three-fourths of the rest of the form, this did not weigh heavily upon them.

In this case Tom and East and all the other boys were being disobedient deliberately; deliberate disobedience became habitual to Tom and East. And why? At 16 they broke every school rule for the fun of the thing. At 17, East said,

> 'What one has always felt about the masters is that it's a fair trial of skill between us and them. . . . We're natural enemies in school, that's the fact. We've got to learn so much Latin and Greek, and do

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[1] T. Hughes, *Tom Brown's Schooldays.*

[2] Between 11 and 12 years old: this was the age of most boys in the Lower Fourth.

> so many verses, and they've got to see that we do it. If we can slip the collar, and do so much less without getting caught, that's one to us. If they can get more out of us, or catch us shirking, that's one to them. All's fair in school except lying. That's my school morality, and it has served me, and you too, Tom, for the matter of that, these five years.' Tom couldn't help feeling how completely he had hit his own theory and practice up to that time.

Thus, on purpose, the two boys meant to break the rules. And their masters were not very well able to deal with them, The two were flogged many times, and flogging had no effect. At last Dr. Arnold sent for them, and told them very seriously that the rules were made for the good of the school, and that if they did not keep them they must both go. This speech gave them both a horrible spasm of fright. But it did not convince them in the least that the rules were any good at all. How could these two boys be got to obey? To Tom was given the charge of a little new boy, Arthur, who seemed rather a muff. But the fate of the experiment was decided on the very first night. In the dormitory, before the other boys, Arthur knelt down and said his prayers.

> It was no light act of courage in those days, for a little fellow to say his prayers publicly, even at Rugby.

Tom had promised his mother that he would, and had not done so, through fear. That night he suffered as much as he could suffer of shame and unhappiness.

> The first dawn of comfort came to him in swearing to himself that he would stand by that boy through thick and thin, and help him, and cheer him, and bear his burdens, . . . for the good deed done that night.

This was a purpose as solemnly taken as Tom could take one.

Very soon, he was fond of Arthur, with all his affectionate heart. He made his own life very uncomfortable in consequence. As East said, he cackled after Arthur like a hen with one chick; and when the worthy 'East and three or four others of his own particular set scampered off from the school gates on some jolly lark not quite according to law', Tom, fuming and grumbling and confounding the Doctor and Arthur too, turned away from the gates.

Thus Tom now kept most of the rules, and all because of one reason. Unless he kept rules, he could not possibly carry out his own purpose, of seeing after Arthur. He obeyed for the reason which lies at the root of all obedience: because keeping the rules had now become an indispensable means to his own purpose. This is discipline. Discipline means, the acceptance of restrictions, as a means towards an end.

Tom's obedience to rules was a very unintelligent obedience. Apparently it was not until the end of Tom's last year in the Sixth that he saw real point in most of the rules. The cause of his blindness was perhaps his experience long before, when he was in the Lower Fourth. The master had made no real attempt to alter the opinion of the boys about the four-seater desk. And this is the only way in which deliberate disobedience can possibly be dealt with. There is no medium between that and expulsion. Unless you alter the boy's will, you do nothing. The master never attempted to make the boys see that it was rather hard on anybody who did want to work, and really not quite the game. The force of a mature opinion, put in simple words, yet serious, the force of a conviction, prepared for objections and able to answer them, is very hard to resist. Suggestion, in the listener, plays into the hands of the speaker. And, secondly, boys of 11 can understand the arguments the master might have used. They can understand respect for work, and they can understand 'being a nuisance'. So that there was a case for the master to put to them. But probably the master himself was not convinced. The story does not read as though the masters had thought about their discipline very much. For the whole affair was really their fault. To have all the Lower School making a Babel together was in itself throwing up the game: how could anybody work? Even the masters had to tramp about. And the boys were 'hammering at' Euripides—some of the most mature poetry in the world, in Babel, at 11 years old! Here the masters made a full and open confession of their point of view. They did not attempt to find work that interested the children. The murder is out. At Rugby, under Dr. Arnold, the masters did not believe in intellectual life. Now, if children are not interested in their work, the whole *raison d'être* of discipline ceases to exist. For discipline is the acceptance of restriction, *for a purpose*; and the purpose in school is work. If the work means nothing to the children, the discipline is nothing to their purposes. It ceases to be discipline; it becomes a servitude or a game of skill.

Besides, the desk ought to have been moved right out of the room.

But will children ever give this inward consent to school work?

About forty little children, near 8 years old, are sitting in little old-fashioned double desks. Some six children are out of their places: two are going to the book cupboard, one to the blackboard, two to the desk of the mistress. One is fetching a card from a bag hanging on the wall. On the blackboard is written: 'Poetry, Writing, Sums, Composition, Reading.' Some children are learning poetry, some are reading, some writing, a great many are doing sums. There is a hum, but not a Babel. A child puts away her sums, rises, stares thoughtfully at the clock, and goes to a chart hanging upon the wall; she finds her own name in the column of names, and writes 'S. 40 m.' in the next column. Each child is doing the work she has chosen to do, for the time it takes her to do it.

The mistress is working with one or two children. For an hour she has not spoken to the class as a whole. Now she rises and says, 'Put away what you are doing'. She gives due time, and it is done. The room is now quite silent. 'Lead out.' These are direct commands: they are obeyed promptly.

In the town where this class is, a class of big boys (9–13) and a class of babies (4–6) offer just the same spectacle of business. The work of each of these three classes is based on just the same thing—work that interests the children. It was Mme Montessori who said clearly, 'The child is naturally a worker'; and, 'The dawn of discipline is through work'. Everything depends upon the discovery of the right subject-matter and the right method of teaching at each age. This is the absorbing interest open now to every teacher.

When one speaks of the 'right subject-matter', people are apt to think that one means to abandon the usual subjects and allow the children to trifle at bizarre nonsense. But children are very like us; bizarre nonsense would not hold them, and the great ordinary subjects hold them far better than they would hold us. Children of 6 and 7 become absorbed in reading, and writing, and sums, and poetry, and stories. But if the maturest literature, and summaries of science, are laid before them, they cannot find their own pleasure and purpose in it. Tom Brown never saw it, nor, in real life, did John Astley.[1] So they copied, and cribbed, and got fixed habits of divided attention. Conscientious boys forced themselves to work from a motive outside the work—a most dangerous mental habit. When Arthur proved that it was morally wrong to use a crib in class, Tom worked in this way. This change was an advance in honesty, but it was not nearly such a general advance as whole-hearted interest would have been. If Tom could have thought the books 'jolly interesting, and jolly good stuff', then he would have had some reason for looking out the words, and he would have been leading a healthy mental life.

Obedience to external law is but one form of discipline. The final type of discipline is obedience given to an inward law,[2] which has been made with thought, and tested by criticism. This is a type of discipline of which all ages are capable. It is here that we have to reconsider all our accustomed treatment even of little children. For little children can decide so much more for themselves than we have allowed. We have thought we must decide for them the length of time to be spent on a lesson, the moment at which the lesson should begin, the movements the child might make, the words he might speak; we have told him what to do with his pencil, his hands, his feet. 'All sit up, hands behind! Don't touch your pencil yet—pick up your pens. Now put them down. *You*, the boy at the back! I didn't tell you to begin writing.' I have heard these directions given to boys of 11 and 12. What interference with a sensible purpose! What destruction of training! What pettifogging and slavery! It is freedom of choice, followed by checking of the results, that is training. It is better to choose wrongly than not to choose, provided that you are brought to see your mistake, and what the right course would have been. The case of Alice, and the case of Philip, illustrate this training. What the limits of choice are, does depend on the particular children concerned; but the principle is always the same. Give freedom of choice wherever the children can possibly decide, and expect obedience on a few points.

All ages are capable of the real discipline of making and following an inward law. In the long run, adult life demands this sort of discipline insistently. To meet this demand, a mind must have reached some independence. It is an old idea, that a person must become independent, in some degree, during adolescence. But there is now new scientific evidence which strengthens it; this new knowledge goes so far as to require some mental independence, even of home and family influence. Without it, adolescence cannot be quite sound, nor adult life quite untrammelled in the use of its strength.

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[1] Extract 13.

[2] Cf. Stanley, *In Darkest Africa*, i. 5.

The practical deduction is obvious. Young people must decide for themselves whatever they can. They must assent to the laws which govern them. This is the essential of self-government. As to its form, it may vary. One stage, however, there must be. People must always discuss proposals, and come to some conclusion about them. Now discussions of this sort, conducted by young people, are often very feeble. For one thing, the young sometimes make grosser mistakes in forecasting the results of action than older people, for the latter can usually call to mind some kindred case as a guide. For another thing, young people often see things not quite in the ordinary light of the world. For instance, a girl may think that an act always passes current at the value placed upon it by the issuer; but this is not so. Young men and women of 15 and 16 are in a new world, and often actually at a new school or in a new employment, and they are not sure what value things have in the new world. For this reason, they often do things which are quite childish. One of the great needs of adolescence is to rediscover the values of common actions. Often, a discussion with a growing boy or girl turns on a petty affair—such a thing as a child of 9 might do. In a child of 9 one would simply check the action, but with the adolescent, the whole point is, that he should see the value given to it among men and women. An adolescent is so sensitive in all the emotions of self, and in all the social tendencies, that he may feel the influence of another person very deeply. On the other hand, nothing is easier than to wound such tender feelings too deeply. Any kind of discipline by argument or action must be perfectly impersonal in tone. The relation between A and B has nothing to do with 'what is the right thing to do'. To bring the personal relation into the question is either to arouse a wrong motive, or to arouse an unnecessary resistance.[1]

[1] Cf. Adams, *The Education of Henry Adams.*

All defects allowed for, there ought to be some form of common deliberation in a community of adolescents, for the reason suggested above. And there is another reason. At a meeting, people may argue on different sides. People weigh the arguments. They think what will happen if they do this and if they do the other. The assembly acts rather as one does in making up one's mind to a deliberate action. Thus common deliberation may influence individual minds towards deliberation. Anything which makes us act more thoughtfully is good for us. Our real decisions are far fewer than we think. We are not in danger of being too thoughtful in our actions. Even the mature and the wise act, far more often than they know, in childish ways, by habit, by impulse, by repression, by displacement. Even displacement of a worse purpose by a somewhat better one is not the direct use of energy for a purpose chosen with a clear mind. The most intelligent form of action which we can use is willed action. In it, thought and action are wedded in the right relation; and, as far as we know, it is in this sovereignty of thought that our best hope lies.

# PART II

## REMARKS ON EVIDENCE AND ILLUSTRATION

I. Cases brought forward here are not proofs. One single instance of an experience cannot prove that most people have that experience. To prove that, one would have to go over experiences case by case.

Cases quoted here are given as illustrations of tendencies, whose existence in most people is strongly suggested by the mass of evidence already examined by many psychologists.

II. I have quoted De Quincey, Barbellion, and Mill, among others. Of these, one was a drug-eater, one fatally diseased, the other a phenomenon of precocity. These men were not ordinary men. Many people would think that they were quite unrepresentative, and that therefore their experience is quite valueless as illustration.

But had they been far less ordinary than they were, they would be the more suitable witnesses. They do not differ from others by having something inhuman in them, or by lacking human powers. They differ from others in having some human powers in an extraordinary degree. Poe's imagination and Barbellion's self-consciousness (to couple a great thing and a small) are human imagination and human self-consciousness. Even in cases of mental disease, it is not non-humanity, but the exaggeration of one human experience that we find.

III. Many of these extracts seem long, compared with historical extracts. In these latter the value often lies in the exact wording of one or two clauses. But these psychological extracts are of a different kind. It is not a phrase but an episode, and not one episode but a whole series, that is important in life; and the extracts are really marred by their incompleteness. Only when one reads the whole of one of the books quoted does one see how things worked out in the long run, and how the circle of life was completed.

| *Author.* | *Ages covered.* | *Subjects illustrated.* |
|---|---|---|
| 1. Anon. | To 9 months | Diet. Habit [of excretion]. |
| 2. Darwin, C. | To 1 year | Control of nerve and muscle. Emotion. |
| 3. Taine, H. | To 1½ years | Language. |
| 4. Martineau, H. | 1½–11 | The senses. Emotions (fear, self-feeling). Transition age (7). Interests. |
| 5. Jung, K. | 3–4 | Thought. Sex. |
| 6. Gosse, E. | 5–6 | Self-feeling. Thought. |
| 7. Wallace, A. R. | 3 or 4–14 | Imagery. Memory and interest. Emotion (self-feeling). Interest and change of interest. |
| 8. Hughes, T. | 6–8 | Individual difference. Emotion (self-feeling and anger). |
| 9. Tyrrell, G. | 7–15 | Transition ages (7–8 and 14–15). Emotion (self-feeling). Memory. Interests and change of interest. |
| 10. De Quincey, T. | 6–7 and 11–12 | Individual difference. Emotion (self-feeling). Imagination. |
| 11. De Quincey, T. | | Imagination and imagery. |
| 12. Darwin, C. | 9–16 | Memory and interest. Thought. |
| 13. Astley, J. D. | 14–19 | Interest. Discipline. |
| 14. Mill, J. S. | 15–22 | Emotion (self-feeling, shyness). Social influences. Transition ages (15 and 20–1). |
| 15. Barbellion, W. | 13–21 | Transition age (13–14). Emotion (self-feeling). |
| 16. Wagner, R. | 17 | Social influences (sympathy, imitation). |
| 17. Stanley, H. M. | — | Willed action. |
| 18. Warner, F. | — | A dull child. |
| 19. ,, | — | A deficient child. |

## 1

## A DIET HISTORY

19th week.

17.11.16. Began giving one bottle a day at 1 o'clock. Great trouble to make him take first bottle.

(Quantity, 4 oz. water, 4 teaspoons Glaxo.)

18.11.16. Very restless all day and cried a good deal. Increased bottle to 5½ oz. water, 5½ teaspoons Glaxo.

Gave fig juice (1 tablespoon) with 4 o'clock feed.

5 months old.

During past month, has become much more lively, kicking in bath, smiling when spoken to. Can nearly sit up; holds head up well. Sleeps all night through, occasionally waking 6–6.30. Sleeps less during day, 1–2 hr. morning, but very often 2 hrs. after bottle.

Actions more regular and more formed. Is learning what to do when held out. Enema used twice in the month, but no aperient given. Napkin nearly always dry at 9.30 p.m.

24th week. Was weaned.

Began Virol, 1 o'clock and 7 o'clock, ½ eggspoonful.

7 months.

During past two months, can nearly sit up alone. Kicks and splashes in his bath, catching his own toes. Attempts to crawl when put on the bed, scratching with his hand, and wriggling his body and trying to push with his toes.

Turns his head when called by name, and stretches out his hand for anything he wants. Can laugh and say Dada and Geegee, and now holds his own bottle. Very much more bodily activity. Sleeps about 1½ hrs. during the day.

One action only in the day. No medicine given during these two months. I have increased Virol, giving ¼ teaspoonful in each bottle.

This week his first two teeth came through.

34th week.

Milk 1 oz. at 10 o'clock, ½ white of egg, little of yolk, and eggcup of boiled warm water.

End of 34th week.

7 o'clock: 7 oz. Glaxo, 7 oz. water, teaspoon Virol.

10 o'clock: Grape juice, Angier's Emulsion, 2 oz. milk and 5 oz. water, teaspoon Virol.

1 o'clock: ½ white of egg, piece of yolk, 1 oz. of water, 6 oz. Glaxo, 6 oz. water.

4 o'clock: Grape juice, emulsion, 2 oz. milk, 5 oz. water, teaspoon Virol.

7 o'clock: Drink of water, 7 oz. Glaxo, 7 oz. water, teaspoon Virol, emulsion.

8 months.

He now takes his midday meal sitting up in his chair, and has ½–¾ egg and 4 oz. Glaxo, fruit juice.

I am beginning to increase first morning feed and last feed so as to decrease 10 o'clock feed and tea feed. He has begun sitting up for about ½ hr. at tea-time.

Motions now 10 o'clock a.m. and very small one at 4 p.m. He is generally dry when changed at 8.45 p.m. Sleeps now about 2 hrs. in the morning, and generally another ½ hr. during the day.

I see no signs of any more teeth. He is very contented and sleeps his full 12 hrs. at night. Hair growing at the back of his head.

38th week.

1.4.17. 3–4 oz. veal broth. Drank his supper from glass measure by the spout.

2.4.17. Drank 8 oz. at 7.30. Only 5 oz. at 10 a.m. Egg for lunch. First day without bottles. He is having practically a whole egg now. He is having rusk.

9 months.

Top left tooth cut. Motions normal. Left-hand tooth through, the other showing, that is, gum swollen and red. During the time these teeth have been cutting, he has been very content and slept well. There has been no rash as with his first teeth, but during last fortnight there has been a decided disinclination both to finish his meals, especially 10 a.m. and 4 p.m., and to have his 10 o'clock bottle at all. Motions have been quite normal, no tendency to diarrhoea. Only one motion in the day.

I have given him mutton broth as a change from egg, and an occasional crust after the 4 o'clock bottle.

He can sit up much better, but not yet by himself. He still cannot crawl, but makes gallant efforts, and can nearly turn himself over.

## 2

[Darwin, A biographical sketch of an Infant, *Mind*, ii. 285 (1877).]

Charles Darwin (1809–82) published the *Origin of Species* in 1859 and the *Descent of Man* in 1871. The latter book includes the natural history of man, that is to say, the description of man and his ways. Darwin had collected material for it since 1838 at least. The following account of one of Darwin's sons, based on a diary written in 1840, was a tiny fraction of the evidence which Darwin collected.

During the first seven days, . . . sneezing, hickuping (*sic*), yawning, stretching, and of course sucking and screaming, were well performed by my infant. . . . At this time, though so early, it seemed clear to me that a warm soft hand applied to his face excited a wish to suck. . . . During the first fortnight he often started on hearing any sudden sound, and blinked his eyes. Once, when he was 66 days old, I happened to sneeze, and he started violently, frowned, looked frightened, and cried rather badly; for an hour afterwards . . . every slight noise made him start. . . . Although so sensitive to sound in a general way, he was not able, even when 124 days old, easily to recognize whence a sound proceeded, so as to direct his eyes to the source.

With respect to vision, his eyes were fixed on a candle as early as the 9th day, and up to the 45th day nothing else seemed thus to fix them; but on the 49th day his attention was attracted by a bright coloured tassel, as was shown by his eyes becoming fixed and the movements of his arms ceasing. It was surprising how slowly he acquired the power of following with his eyes an object if swinging at all rapidly; for he could not do this well when seven and a half months old. . . .

The movements of his limbs and body were for a long time vague and purposeless, and usually performed in a jerking manner; but there was one exception to this rule, namely, that from a very early period, certainly long before he was 40 days old, he could move his hands to his own mouth. When 77 days old he took the sucking bottle in his right hand, . . . and he would not take it in his left hand until a week later, although I tried to make him do so, so that the right hand was a week in advance of the left. . . . When between 80 and 90 days old, he drew all sorts of objects into his mouth, and in two or three weeks' time could do this with some skill, but he often first touched his nose with the object, and then dragged it down into his mouth. After grasping my finger and drawing it to his mouth, his own hand prevented him from sucking it. But on the 114th day, after acting in this manner, he slipped his own hand down so that he could get the end of my finger into his mouth. This action was repeated several times, and evidently was not a chance but a rational one. . . .

When four months old he often looked intently at his own hands and other objects close to him, and in so doing the eyes were turned much inwards, so that he often squinted frightfully. In a fortnight after this time (i. e. 132 days old), I observed that if an object was brought as near to his face as his own hands were, he tried to seize it, but often failed. . . .

Anger. It was difficult to decide at how early an age anger was felt; on his eighth day he frowned and wrinkled the skin round his eyes before a crying fit, but this may have been due to pain or distress, not to anger. . . . When nearly four months old, and perhaps much earlier, there could be no doubt, from the manner in which the blood gushed into his whole face and scalp, that he easily got into a violent passion. . . . When eleven months old, if a wrong plaything was given him, he would push it away and beat it. I presume that the beating was an instinctive sign of anger, like the snapping of the jaws by a young crocodile just out of the egg, and not that he imagined that he could hurt the plaything. . .

Fear. This feeling probably is one of the earliest which is experienced by infants, as shown by their starting at any sudden sound when only a few weeks old. Before the present one was four and a half months old I had been accustomed to make close to him many strange and loud noises which were all taken as excellent jokes, but at this period I one day made a loud snoring noise which I had never done before. He instantly looked grave and then burst out crying. . . .

Pleasurable sensations. This infant smiled when 45 days, a second infant when 46 days old. . . . The smiles arose chiefly when looking at their mother, . . . but this infant often smiled then, and for some time afterwards from some inward pleasurable feeling. . . . When 110 days old he was exceedingly amused by a pinafore being thrown over his face and then suddenly withdrawn, and so he was when I suddenly uncovered my own face and approached his. He then uttered a little noise which was an incipient laugh. . . . I believe that for three or four weeks before (this) time, he received a little pinch on his nose and cheeks as a good joke. . . .

Affection. This probably arose very early in life, if we may judge by his smiling at those who had charge of him when under two months old; though I had no distinct evidence of his distinguishing and recognizing any one, until he was nearly four months old. When nearly five months old he plainly showed his wish to go to his nurse. But he did not spontaneously exhibit affection by overt acts until a little above a year old, namely, by kissing several times his nurse who had been absent for a short time.

(*By kind permission of Mr. John Murray.*)

### 3

[H. Taine, Study of a Child, *Mind*, ii. 252 (1877).]

H. Taine (1828–93) was a historian and philosopher of immense influence in France about 1870. His predominant interest was the study of man's history, both in nations and in individuals.

The following observations were made from time to time and written down on the spot. The subject of them was a little girl whose development was ordinary, neither precocious nor slow.

From the first hour, . . . she cried incessantly, kicked, and moved all her limbs and perhaps all her muscles. In the first week, . . . she moved her fingers and even grasped a forefinger for some time. About the third month she began to feel with her hands, and to stretch out her arms, but she cannot yet direct her hand; she touches and moves at random; she tries the movements of her arms, and the tactile and muscular sensations which follow from them, nothing more. In my opinion it is out of this enormous number of movements, constantly tried, that there will be evolved by gradual selection the intentional movements, having an object and attaining it. In the last fortnight, at two and a half months, I make sure of one that is evidently acquired; at the sound of her grandmother's voice she turns her head to the side from which it comes. . . .

At about three and a half months . . she was put on a carpet in the garden; there, lying on her back or stomach, for hours together, she kept moving about her four limbs, and uttering a number of cries and different exclamations, but vowels only, no consonants; this continued for several months.

By degrees consonants were added to the vowels. . . . It all ended in a sort of very distinct twittering, which would last a quarter of an hour at a time, and be repeated ten times a day. . . . She takes delight in her twitter, . . . she seems to smile with joy over it, but as yet it is only the twittering of a bird, for she attaches no meaning to the sounds she utters. She has learnt only the materials of language (twelve months). . .

As yet she attaches no meaning to any word she utters, but there are two or three words to which she attaches meaning when she hears them. She sees her grandfather every day, and a chalk portrait of him . . . has often been shown to her. From about ten months, when asked, 'Where is Grandfather?' she turns to this portrait and laughs. Before the portrait of her grandmother, not so good a likeness, she makes no such gesture and gives no sign of understanding. From eleven months when asked, 'Where is Mamma?' she turns towards her mother, and she does the same for her father. I should not venture to say that these three actions surpass the intelligence of animals. A little dog we have here understands the word 'sugar' as well. It comes from the other end of the garden to get a bit. There is nothing more in this than an association, for the dog between a sound and a taste, for the child between a sound and an individual face; the object denoted by the sound has not as yet a general character.

However, I believe that the step was made at twelve months; here is a fact which I think decisive. This winter she was carried daily to her grandmother, who often showed her a painted copy of a picture by Luini of the Infant Jesus, saying at the same time, 'There's Bébé'. A week ago, in another room, when she was asked, 'Where's Bébé?' (meaning herself), she turned at once to the pictures. . . . 'Bébé' has then a general significance for her . . . that is to say, if I am not mistaken, something variegated in a shining frame . . .

14 months and 3 weeks. The acquisitions of the last six weeks have been considerable; she understands several other words besides bébé, and there are five or six that she uses attaching meaning to them. The principal words she utters at present are papa, mama, tété (nurse), oua-oua (dog), koko (chicken), dada (horse or carriage), mia (cat), kaka, and tem; the two first were papa and tem, this last word very curious and worth attention.

'Papa' was pronounced for more than a fortnight unintentionally, and without meaning, as a mere twitter. . . . It was later than the association between the word and the image or the sight of her father was fixed, and called to her lips the sound 'papa', or that the word spoken by some one else definitely and regularly called up in her the . . . search for her father. . . . She still plays with the sound, though she understands its meaning. . . .

[She shows] the specially human gift, . . . the capacity for seizing analogies. . . . She was in the habit of seeing a little black dog . . . which often barks, and it was to it that she first learnt to apply the word oua-oua. Very quickly and with very little help she applied it to dogs of all shapes and kinds that she saw in the streets, and then . . . to the bronze dogs near the staircase. Better still the day before yesterday, when she saw a month-old kid that bleated, she said 'Oua-oua', calling it by the name of the dog, which is most like it in form, and not by that of the horse . . . or of the cat. . . . No dog or parrot would have done as much. . . .

At first, for more than a fortnight, the child uttered the word 'tem' as she did the word 'papa' . . . like a simple twitter. Little by little she associated this word with a distinct intention; it now signifies for her, Give! Take! Look! . . . Perhaps it comes from the word 'Tiens', that is often used to her, and with something of the same meaning.

From the 15th to the 17th month.

Great progress. She has learnt to walk and even to run, and is firm on her little legs. We see her gaining ideas every day, and she understands many phrases, for instance, 'Bring the ball'. . . . She has learnt or invented very few new words. The chief are Pa (Paul), Babert (Gilbert), bébé (baby), bééé (goat), cola (chocolate), ona-ona (anything good to eat), ham (to eat, I want to eat). There are a good many others that she understands but cannot say, for instance, grandpère and grandmère. . . .

Bébé. We have seen the strange signification that she gave to this word at first. Little by little she came nearer to the usual meaning. Other children were pointed out to her as bébés, and she was herself called by the name and now answers to it. Further, when put down before a very low mirror and shown her face reflected in it, she was told, 'That's Bébé,' and she now goes alone to the mirror and says Bébé, laughing when she sees herself. . . She has extended the meaning of the word, and calls all little figures bébés. . . . Education produced an unexpected effect upon her; the general character grasped by the child is not that which we intended; we taught her the sound, she has invented the sense. . . . For the last two months, on the other hand, she has left off using the word 'tem' . . . This is no doubt because we did not choose to learn it, for it did not correspond to any one of our ideas, but combined those that are quite distinct; we did not use it with her, and therefore she left off using it herself.

[These observations were interrupted by the tragic war of 1870.]

## 4

[Harriet Martineau, *Autobiography*, p. 9.]

Harriet Martineau (1802–76), one of the earliest female writers by profession, is still known to some children by *Feats on the Fiord*. She divides her youth into three periods; the reasons and the date of the period appear in the extract, and should be compared with the divisions and dates of George Tyrrell [Extract 9].

[Age 1½.] My first recollections are of some infantine impressions which were in abeyance for a long course of years, and then revived in an inexplicable way. . . . There is no doubt of the genuineness of the remembrance, as the facts could not have been told me by anybody else. I remember standing on the threshold of a cottage, holding fast by the door-post, and putting my foot down, in repeated efforts to reach the ground. Having accomplished the step, I toddled (I remember the uncertain feeling) to a tree before the door, and tried to clasp and get round it, but the rough bark hurt my hands. At night of the same day, in bed, I was disconcerted by the coarse feel of the sheets, so much less smooth and cold than those at home; and I was alarmed by the creaking of the bedstead. It was a turn-up bedstead in a cottage . . . where I was sent for my health, being a delicate child. . . .

Milk has radically disagreed with me all my life; but, when I was a child, it was a thing unheard of for children not to be fed on milk, so, until I was old enough to have tea for breakfast, I went on having a horrid lump at my throat for hours of every morning, and the most terrific oppressions in the night. . . . I do not remember any dread of thieves or ghosts in particular, but things as I actually saw them were dreadful to me, and it now appears to me that I had scarcely any respite from the terror. My fear of persons was as great as any other. To the best of my belief, the first person I was ever not afraid of was Aunt Kentish, who won my heart and my confidence when I was 16. . . . It now occurs to me—and it may be worth while to note it—what the extremest terror of all was about. We were often sent to walk on the Castle Hill at Norwich. In the wide area below, the residents were wont to expose their feather beds, and to beat them with a stick. That sound—a dull shock—used to make my heart stand still; and it was no use my standing at the rails above, and seeing the process. The striking of the blow and the arrival of the sound did not correspond, and this made matters worse. I hated that walk and I believe for that reason. My parents knew nothing of all this. . . .

I was not more than 2 years old when an impression occurred to me which remains vivid to this day. It seems indeed as if impressions of touch were at that age more striking than those from the other senses. I say this from observation of others beside myself, for my own case is peculiar in that matter. . . On the occasion I refer to, I was carried down a flight of steep back stairs, and Rachel (a year and a half older than I) clung to the nursemaid's gown, and Elizabeth was going before (still quite a little girl), when I put down my finger-ends to feel a flat velvet button on the top of Rachel's bonnet. The rapture of the sensation was really monstrous, as I remember it now. These were our mourning bonnets for a near relation, and this marks the date, proving me to have been only 2 years old. . .

[Age 4.] My idea of heaven was of a place gay with yellow and lilac crocuses. My love of gay colours was very strong. When I was sent with the keys to a certain bureau in my mother's room, . . . I used to stay an unconscionable time, though dreading punishment for it, but utterly unable to resist the fascination of a certain watch-ribbon kept in a drawer there. This ribbon had a pattern in floss silk, gay, and beautifully shaded; and I used to look at it till I was sent for, to be questioned as to what I had been about. .

[Age 5.] While I was afraid of everybody I saw, I was not in the least afraid of God. Being usually very unhappy, I was constantly longing for heaven, and seriously, and very frequently, planning suicide in order to get there. . I had a devouring passion for justice; justice first to my own precious self, and then to other oppressed people. Justice was precisely what was least understood in our house, in regard to servants and children. Now and then I desperately poured out my complaints, but in general I brooded over my injuries, and those of others who dared not speak, and then the temptation to suicide was very strong. . . . I gloated over the thought that I would make somebody care about me in some sort of way at last; and, as to my reception in the other world, I felt sure that God could not be very angry with me for making haste to Him when nobody else cared for me, and so many people plagued me. . By degrees the design dwindled down into running away. . . .

It is evident enough that my temper must have been very bad. It seems to me now that it was downright devilish. . . My temper might have been early made a thoroughly good one by the slightest indulgence shown to my natural affections, and any rational dealing with my faults; but I was almost the youngest of a large family, and subject, not only to the rule of severity to which all were liable, but also to the rough and contemptuous treatment of the elder children, who meant no harm, but injured me irreparably. I had no self-respect, and an unbounded need of approbation and affection. . . . I was certainly fond of going to chapel before that Newcastle journey which divided my childhood into two equal portions, but my besetting troubles followed me even there. My passion for justice was baulked there, as much as anywhere. The duties preached were those of inferiors to superiors, while the *per contra* was not insisted on with any equality of treatment at all. . . . I used to thirst to hear some notice of the oppression which servants and children had (as I supposed universally) to endure in regard to their feelings, while duly clothed, fed, and taught; but nothing of the sort ever came, but instead a doctrine of passive obedience which only made me remorseful and miserable. I was abundantly obedient in act, for I never dreamed of being otherwise, but the interior rebellion kept my conscience in a state of perpetual torture. . . I always concluded myself wrong about everything, while pretending entire complacency and assurance. My moral discernment was almost wholly obscured by fear and mortification.[1]

. . . It is time to set out on the second period of my childhood—beginning with that memorable Newcastle journey.

[Age 7.] That period was memorable, not only from the enlarging of a child's ideas that follows from a first long journey, but because I date from it my becoming what is commonly called 'a responsible being'. On my return home, I began to take moral charge of myself. I had before, and from my earliest recollections, been subject to a haunting, wretched, useless remorse, but from the time of our return from Newcastle, bringing Ann Turner with us, I became practically religious with all my strength. . . .

I think it could not have been long after that time that I took up a project of extraordinary use to me. . . . I thought it would be a fine thing to distribute Scripture instructions under the heads of the virtues and vices, so as to have encouragement or rebuke always ready to hand. So I made a paper book, ruled and duly headed. With the Old Testament I got on very well, but I was amazed at the difficulty with the New. I knew it to be so much more valuable . . . than the Old, that I could not account for the small number of cut and dry commands. [At last I was obliged to give it up.]

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[1] I feel compelled to state that towards one person I was habitually untruthful, from fear. To my mother I would in my childhood assert or deny anything that would bring me through most easily. I remember denying various harmless things—playing at a game of battledore, for one, and often without any apparent reason, and this was so exclusively to one person that, though there was . . . punishment, I do not believe I was regarded as a liar in the family.

When I was 7 years old—the winter after our return from Newcastle—I was kept from chapel one Sunday afternoon by some ailment or other. . . . I looked at the books on the table. The ugliest-looking of them was turned down open, and my turning it up was one of the leading incidents of my life. That plain, clumsy, calf-bound volume was *Paradise Lost*. . . That volume was henceforth never to be found but by asking me for it; . . . in a few months, I believe there was hardly a line in *Paradise Lost* that I could not instantly have turned to. I sent myself to sleep by repeating it, and when my curtains were drawn back in the morning, descriptions of Heavenly Light rushed into my memory.

[When Harriet was nearly nine, her youngest sister, Ellen, was born.]

When I first saw her it was as she was lifted out of her crib, at a fortnight old, asleep. . . . The passionate fondness I felt for her from that moment has been unlike anything else I have felt in life. . . . She was a pursuit to me, no less than an attachment. . . . My curiosity was intense; and all my spare minutes were spent in the nursery watching—literally watching—the baby. This was a great stimulus to me, in my lessons, to which I gave my whole power, in order to get leisure the sooner. That was the time when I took it into my head to cut up the Bible into a rule of life, as I have already said, and it was in the nursery chiefly that I did it—sitting on a stool opposite the nursemaid and baby, and getting up from my notes to devour the child with kisses. There were bitter moments. . . . One abiding anxiety which pressed upon me was lest this child should be dumb. . . . I had no other idea than that she must learn to speak . . . as I had now to learn French—each word by an express effort; and if I, at 10 and 11, found my vocabulary so hard, how could this infant learn the whole English language? The dread went off in amazement. . . .

For nearly two years [after 9], Rachel and I were taught at home. Our eldest brother taught us Latin, and the next brother, Henry, writing and arithmetic, and our sister, French, reading, and exercises. We did not get on well, except with the Latin. Our sister expected too much from us, both morally and intellectually, and she had not herself been carried on so far as to have much resource as a teacher. . . . As for Henry, he made our lessons . . . his funny time of day, and sorely did his practical jokes and ludicrous severity afflict us. . . I should say, on their behalf, that I, for one, must have seemed a most unpromising pupil, my wits were so completely scattered by fear and shyness. I could never give a definition, for want of presence of mind. I lost my place in class for everything but lessons that could be prepared beforehand. . . .

Next to fear, laziness was my worst enemy. I was idle about brushing my hair, late in the morning, much afflicted to have to go down to the apple closet in winter; and even about my lessons I was indolent. I learned anything by heart very easily, and I therefore did it well, but I was shamefully lazy about using the dictionary and went on, in full anticipation of rebuke, translating *la rosée*, the rose, *tomber*, to bury, and so on. . . . I was sick and weary of the eternal 'Telemachus', and could not go through the labours of the dictionary for a book I cared so little about. This difficulty soon came to an end, for in 1813 Rachel and I went to a good day school for two years, where our time was thoroughly well spent; and there we enjoyed the acquisition of knowledge so much as not to care for the requisite toil. . . . I was eleven when that delectable schooling began, which I always recur to with clear satisfaction and pleasure.

## 5

[Karl Jung, *Collected Papers on Psycho-analysis* (tr. Dr. C. Long).]

This extract shows how a little girl of 3 followed up a perplexing question, 'wherever the argument led her', to the very end. Both the method and the subject of the investigation are interesting. The story is reported by Dr. Jung, a Swiss professor, very distinguished as a student of mental life.

When the little girl, whom we will call Anna, was about 3 years old, she once had the following conversation with her grandmother:

Anna. 'Grandma, why are your eyes so dim?'

'Because I am old.'

A. 'But you will become young again.'

'No. Do you know, I shall become older and older, and then I shall die.'

A. 'Well, and then?'

'Then I shall be an angel.'

A. 'And then will you be a little baby again?'

The child found here a welcome opportunity for provisional solution of a problem. For some time before she had been in the habit of asking her mother whether she would ever have a living doll, a little child, a little brother. This naturally included the question as to the origin of children. As such questions appeared only spontaneously and indirectly the parents attached no significance to them, but answered as lightly and in appearance as carelessly as the child seemed to ask them. Thus her father once told her that children are brought by the stork. . . . This theory seems to have become the starting-point for the investigating activity of the little one. . . .

The birth of her little brother occurred when Anna was 4 years old. Her father . . . carried her into her mother's room. She first threw a rapid glance at her mother, and then displayed something like a mixture of embarrassment and suspicion, as if thinking, 'Now what else is going to happen?' (Father's impression.) . . .

But once when her mother was alone, she ran into the room, embraced her, and said, 'Well, aren't you going to die now?'

. . . It was for this reason that she had to seek a good opportunity of reassuring herself as to whether the mother was to die. With the happy issue, however, the 'rebirth' theory sustained a severe shock. There still remained the stork theory, . . . which was often discussed, and was naturally reinforced by the agreement of those about her. (At her grandmother's.) . . .

When Anna returned to her parents, . . . it often happened that she was disobedient to her mother ; she was insolent, saying, 'I am going back to Grandma.'

The following scene took place :

Mother. 'Come, we are going into the garden now.'

Anna. 'You are telling lies ; take care if you are not telling the truth.'

M. 'What are you thinking of ? I *am* telling the truth.'

A. 'No, you are not telling the truth.'

M. 'You will soon see that I am telling the truth ; we are going into the garden now.'

A. 'Indeed, is that true ? Is that really true ? Are you not lying ? '

Scenes of this kind were repeated a number of times. This time the tone was more rude and more vehement, and the accent on the word 'lie' betrayed something special which the parents did not understand. Indeed, at first they attributed too little significance to the spontaneous utterances of the child. In this they merely did what education usually does. We usually pay little heed to children in every stage of life ; in all essential matters, they are treated as not responsible, and in all unessential matters they are trained with an automatic precision. . . .

A series of questions arose almost daily. 'Why is Sophie younger than I am ? ' 'Where was Freddie (the little brother) before ? Was he in heaven ? What was he doing there ? Why did he come down just now, why not before ? '

[Anna is evidently confronted by the question : 'Where does the baby come from ? The stork did not bring it, mother did not die.' . . . She has, however, asked this question before, and been told by her father that the stork brings children. This is positively untrue ; she cannot be deceived on this point. Accordingly, Papa and Mamma and all the others lie.]

This state of affairs led the father to decide that the mother should tell the child the truth about the origin of the little brother. This having been done, Anna soon asked about the stork. Her mother told her that the story of the stork was not true, but that Freddie grew inside his mother like the flowers in a plant. At first he was very little, and then he became bigger and bigger as a plant does. She listened attentively without the slightest surprise, and then asked, ' But did he come out all by himself ? '

Mother. ' Yes.'

A. ' But he cannot walk.'

Sophie. ' Then he crawled out.'

[Anna now came to a standstill for about five months.

After which :]

Anna once took marked delight in helping the gardener while he was sowing grass. . . . About a fortnight later she began to observe the young grass sprouting with great pleasure. Once, while doing so, she asked her mother, ' Tell me, how did the eyes grow into the head ? ' The mother told her she did not know. Anna continued to ask whether God or her papa could tell this ? The mother then referred her to her father. Three days later, . . . the father was sitting at the table reading the paper. Suddenly coming up to her father, Anna said, ' Tell me, how did the eyes grow into the head ? '

Father. ' They did not grow *into* the head ; they were there from the beginning and grew with the head.'

A. ' Were not the eyes planted ? '

F. ' No, they grew in the head like the nose.'

A. ' Did the mouth and the ears grow in the same way ? and the hair too ? '

F. ' Yes, they all grew in the same way.'

A. ' And the hair too ? . . . Aren't there little seeds for it ? '

F. ' No. You see, the hair really came out of little grains like seeds, but these were already in the skin long before, and nobody sowed them.' . . .

A. (evidently disappointed and in a distressed tone). ' But how did Freddie get into Mamma ? Who stuck him in ? '

. . . . . . . . . . .

This very precise question could no longer be evaded by the father. He explained to the child, who listened with the greatest attention, that the mother is like the soil and the father is like the gardener; that the father provides the seed, which grows in the mother, and thus gives origin to a baby.

This answer gave extraordinary satisfaction. She immediately ran to her mother, and said, 'Papa has told me everything; now I know it all.' She did not, however, tell what she knew.

(*By kind permission of Messrs. Baillière, Tindal & Cox.*)

## 6

[E. Gosse, *Father and Son*, p. 36.]

Mr. Gosse (b. 1849) wrote this history of his early years for the sake of his father, whose portrait he wished to give to the world. Incidentally he shows how a child discovered his 'self', without the ordinary aid of intercourse with other children.

In the course of this, my sixth year, there happened a series of minute and soundless incidents which, elementary as they may seem when told, were second in real importance to none in my mental history. . . . I was most carefully withdrawn, like Princess Blanchefleur in her marble fortress, from every outside influence whatever, yet to me the instinctive life came as unexpectedly as her lover came to her in the basket of roses. What came to me was the consciousness of self, as a force and a companion, and it came to me as the consequence of one or two shocks, which I will relate.

In consequence of hearing so much about an omniscient God, a being of supernatural wisdom and penetration who was always with us, who made, in fact, a fourth in our company, I had come to think of Him, not without awe, but with absolute confidence. . . . I confused my father in some sense with God; at all events I believed that my father knew everything and saw everything.

One morning, in my 6th year, my mother and I were alone in the morning room, when my father came in and announced some fact to us. I was standing on the rug, gazing at him, and when he made this statement I remember turning quickly, in embarrassment, and looking into the fire. The shock to me was as that of a thunderbolt, for what my father had said was not true.

My mother and I, who had been present at the trifling incident, were aware that it had not happened exactly as it had been reported to him. My mother gently told him so, and he accepted the correction. Nothing could possibly have been more trifling to my parents, but to me it meant an epoch. Here was the appalling discovery, never suspected before, that my father was not as God, and did not know everything. The shock was not caused by any suspicion that he was not telling the truth, as it appeared to him, but by the awful proof that he was not, as I had supposed, omniscient.

This experience was followed by another, which confirmed the first, but carried me a great deal further. In our little back garden, my father had built up a rockery for ferns and mosses, and he had made a leaden pipe so that it pierced upwards through the rockery, and produced, when a tap was turned, a pretty silvery parasol of water. The pipe was exposed somewhere near the foot of the rockery.

One day, two workmen, who were doing some repairs, left their tools during the dinner hour in the back garden, and as I was marching about, I suddenly thought that to see whether one of these tools could make a hole in the pipe would be attractive. It did make such a hole, quite easily, and then the matter escaped my mind.

But a day or two afterwards, when my father came in to dinner, he was very angry. He had turned the tap, . . . there had been a rush of water through a hole, . . . the rockery was absolutely ruined.

Of course I realized in a moment what I had done, and I sat frozen with alarm, waiting to be denounced. But my mother remarked on the visit of the plumbers two or three days before, and my father instantly took up the suggestion. No doubt that was it. . . . No suspicion fell on me ; no question was asked of me. I sat there, turned to stone within, but outwardly sympathetic and with unimpaired appetite.

We attribute, . . . I believe, too many moral ideas to little children.

. . . I am sure that the fear that I experienced for a short time, and which so unexpectedly melted away, was a purely physical one. . . . As to the destruction of the fountain, I was sorry about that for my own sake, since I admired the skipping water extremely.

But the emotions which now thronged within me were not moral at all, they were intellectual. I was not ashamed of having successfully—and so surprisingly—deceived my parents by my crafty silence. I looked upon that as a providential escape, and dismissed all further thought of it. I had other things to think of.

In the first place, the theory that my father was omniscient or infallible was now dead and buried. He probably knew very little. In this case he had not known a fact of such importance that if you did not know that, it could hardly matter what you knew. My father, as a deity, as a natural force of immense prestige, fell in my eyes to a human level. In future, his statements about things in general need not be accepted implicitly.

But of all the thoughts that rushed upon my savage and undeveloped little brain at this crisis, the most curious was that I had found a companion and confidant in myself. There was a secret in this world, and it belonged to me and to a somebody who lived in the same body with me.

It is difficult to define impressions so rudimentary, but it is certain that it was in this dual form that the sense of my individuality now suddenly descended upon me, and it is equally certain that it was a great solace to me to find a sympathizer in my own breast.

I had hours and hours of complete solitude. . . . It will be recollected that the idea of fiction, of a deliberately invented story, had been kept from me with entire success. . . . I am unable to recollect exchanging two words with another child until after my mother's death.

Being so restricted, then, and yet so active, my mind took refuge in an infantile species of natural magic. This contended with the definite ideas of religion which my parents were continuing, with too mechanical a persistency, to force into my nature, and it ran parallel with them. I formed strange superstitions which I can only render intelligible by naming some concrete examples.

I persuaded myself that if I could only discover the proper words to say or the proper passes to make, I could induce the gorgeous birds and butterflies in my father's illustrated manuals to come to life, and fly out of the book, leaving holes behind them. I believed that when, at the chapel, we sang, drearily and slowly, loud hymns of experience and humiliation, I could boom forth with a sound equal to that of dozens of singers, if I could only hit upon the formula. During morning and evening prayers, which were extremely lengthy and fatiguing, I fancied that one of my two selves could flit up, and sit clinging to the cornice, and look down on my other self and the rest of us, if I could only find the key. I laboured for hours in search of these formulas, thinking to compass my ends by means absolutely irrational. For example, I was convinced that if I could only count consecutive numbers long enough, without losing one, I should suddenly, on reaching some far distant figure, find myself in possession of the great secret. I feel quite sure that nothing external suggested these ideas of magic, and I think it probable that they approached the ideas of savages at a very early stage of development.

All this ferment of mind was entirely unobserved by my parents. But when I formed the belief that it was necessary for the success of my practical magic that I should hurt myself, and when, as a matter of fact, I began in extreme secrecy to run pins into my flesh and bang my joints with books, no one will be surprised to hear that my mother's attention was drawn to the fact that I was ' looking delicate '. . . .

As I became very pale and nervous, and slept badly at nights, with visions and loud screams in my sleep, I was taken to a physician, . . . but nothing was done. If I was feeble, it was the Lord's will, and I must acquiesce.

It culminated in a sort of fit of hysterics, when I lost all self-control, and sobbed with tears, and banged my head on the table. While this was proceeding, I was conscious of that dual individuality of which I have already spoken, since while one part of me gave way, and could not resist, the other part in some extraordinary sense seemed standing aloof, much impressed. I was alone with my father when this crisis occurred, and I was interested to see that he was greatly alarmed.

Several things tended at this time to alienate my conscience from the line which my father had so rigidly traced for it. The question of the efficacy of prayer . . . began to trouble me. . .

My parents said, ‘ Whatever you need, tell Him and He will grant it, if it is His will ’. Very well; I had need of a large painted humming top, which I had seen in a shop window in the Caledonian Road. Accordingly, I introduced a supplication for this object into my evening prayer, carefully adding the words, ‘ if it is Thy will ’. This, I recollect, placed my mother in a dilemma, and she consulted my father. Taken, I suppose, at a disadvantage, my father told me I must not pray for ‘ things like that ’. To which I answered by another query: ‘ Why? ’ And I added that he said we ought to pray for things we needed, and I needed the humming top much more than I did the conversion of the heathen or the restitution of Jerusalem to the Jews, two objects of my nightly supplication which left me very cold. . . .

I noticed that my mother held aloof from the discussion, which was carried on with some show of annoyance by my father. . . . He ceased to argue, and told me peremptorily that it was not right for me to pray for things like humming tops, and that I must do it no more. His authority, of course, was paramount, but my faith in the efficacy of prayer was a good deal shaken.

. . . . . . . . . . .

My theological misdeeds culminated, however, in an act so puerile and preposterous that I should not venture to record it if it did not throw some glimmering of light on the subject which I have proposed to myself in writing these pages. My mind continued to dwell on the mysterious question of prayer. . . . All these matters drew my thoughts to the subject of idolatry, which was severely censured at the missionary meeting. I cross-examined my father very closely as to the nature of this sin, and pinned him down to the categorical statement that idolatry consisted in praying to anything or any one but God Himself. Wood and stone, in the words of the hymn, were peculiarly liable to be bowed down to by the heathen in their blindness. I pressed my father further, . . . and he assured me that God would be very angry, and would signify His anger, if any one, in a Christian country, bowed down to wood and stone.

I determined to test the matter for myself, and one morning, when both my parents were safely out of the house, I prepared for the great act of heresy.

I was in the morning room on the ground floor, where, with much labour, I hoisted a small chair on to the table close to the window. My heart was now beating as if it would leap out of my side, but I pursued my experiment. I knelt down on the carpet in front of the table, and looking up I said my daily prayer in a loud voice, only substituting the address 'O Chair!' for the habitual one.

Having carried this act of idolatry safely through, I waited to see what would happen. . . . I gazed up at the slip of white sky above the houses opposite, and expected something to appear in it. . . . I was very much alarmed, but still more excited; I breathed the high sharp air of defiance. But nothing happened. . . . Presently I was quite sure that nothing would happen. I had committed idolatry flagrantly and deliberately, and God did not care.

The result of this ridiculous act was not to make me question the existence and power of God; those were forces which I did not dream of ignoring. But what it did was to lessen still further my confidence in my father's knowledge of the Divine Mind.

My father had said positively that if I worshipped a thing made of wood, God would manifest His anger. I had then worshipped a chair, made (or partly made) of wood, and God had made no sign whatever. My father, therefore, was not really acquainted with the divine practice in cases of idolatry.

And with that, dismissing the subject, I dived again into the unplumbed depths of the *Penny Cyclopaedia.*

*(By kind permission of Mr. Wm. Heinemann.)*

## 7

[A. R. Wallace, *My Life*, i. 25 (1905).]

Alfred Russel Wallace (1823–1913) was one of a large family, the children of a man who started life with an income of £500 a year, which dribbled steadily out of his hands. In 1823 Mr. Wallace was living at Usk, for its cheapness' sake.

Later A. R. Wallace tried various professions. In 1858 he sent to Darwin a long letter in which he outlined an idea of the origin of species, identical with Darwin's own, then preparing for publication. In the most honourable way, Darwin secured the immediate publication of Mr. Wallace's MSS.

The extract should be compared with the recollections of Miss Martineau and of Father Tyrrell.

I

During the whole period of my residence at Usk,[1] I have no clear recollection and can form no distinct mental image of either my father or mother, brothers or sisters. I simply recollect that they existed, but my recollection is simply a blurred image, and does not extend to any peculiarities of feature, form, or even of dress or habits. It is only at a considerably later period that I begin to recollect them as distinct and well-marked individuals whose form and features could not be mistaken, as in fact being *my* father and mother, *my* brothers and sisters, and the house and surroundings in which I can thus first recollect and in some degree visualize them, enable me to say that I must have been then at least 8 years old.

What makes this deficiency the more curious is that, during the very same period at which I cannot recall the personal appearance of the individuals, . . . I *can* recall all the main features and many of the details of my outdoor and to a less degree of my indoor surroundings. The form and colour of the house, the road, the river close below it, the bridge . . . the narrow fields between us and the bridge, the steep wooded bank at the back, the stone quarry, and the very shape and position of the flat stones on which we stood fishing . . . all come before me as I recall those earlier days with a distinctness strangely contrasted with the vague shadowy figures of the human beings who were my constant associates in all these scenes. In the house I recollect the arrangement of the rooms, the French window to the garden, and the blue-papered room in which I slept, but of the people always with me in those rooms, and even of the daily routine of our life, I remember nothing at all. . . .

I may here add another illustration of how vividly these scenes of my childhood remain in my memory. My father was very fond of Cowper's poems, and often used to read them aloud to us children. . . . That about the three kittens and the viper, ending with the lines:

> 'With outstretched hoe I slew him at the door,
> And taught him never to come there no more!'

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[1] From birth to 5 years old.

was perhaps the favourite, and whenever I heard it or read it in after years, the picture always in my mind was of the doorstep of the Usk cottage, with the kittens and the viper in the attitudes so picturesquely described.

The other one was the fable of the sheep, who, on hearing some unaccustomed noise, rushed away to the edge of a pit, and debated whether it would be wise to jump into it, . . . but were persuaded by a wise old bell wether that this would be foolish—

> ' What ! jump into a pit your lives to save,
> To save your lives leap into the grave ! '

And as almost the only sheep I had seen close at hand were in the little narrow field between our house and the bridge, I always associated the scene with that field, although there was no pit of any kind in it.

My recollections of our leaving Usk are very faint. . . . My next recollections are of the town of Hertford, where we lived for 8 or 9 years, and where I had the whole of my school education. We had a small house, the first of a row of four at the beginning of St. Andrew's Street, and I must have been a little more than 6 years old when I first remember myself in this house, which had a very narrow yard at the back, and a dwarf wall, perhaps five feet high, between us and the adjoining house.

My recollections of life in our first house in St. Andrew's Street are very scanty. My father had about half a dozen small boys to teach, and we used to play together ; but I think that when we had been there about a year or two, I went to the Grammar School with my brother John, and was at once set upon that most wearisome of tasks, the Latin grammar. . . . My six years' grinding at Latin only resulted in a scanty knowledge of the vocabulary and grammar, leaving me quite unable to construe a page from a Latin author with any approach to accuracy. . . Had half the time been devoted to teaching us simple colloquial Latin thoroughly, I feel sure it would have been far more useful to those who left school early, and who had no special talent for languages. . . . The youngest of the ushers was named Godwin. He was rather a large-limbed dark young man of 18 or 20. He was very good-natured, and was much liked by the boys, in whose games he often took part. . . . He taught generally in the school, but the only recollection I have of him as a teacher was in one special case. Shortly before I left the school, I and a few others were put on to translate one of the works of Cicero. . . . We sat down and worked away with our dictionaries till we knew the meanings of most of the words, but somehow could not fit them together to make sense. However, at last we thought we had got something of the meaning. We were called up, and the boy at the head of the class began his translation. When he got stuck Godwin asked the others if they could help him, and when we could not, he would tell us the meaning of some difficult word, and then tell the translator to go on. He went on bit by bit till we got to the end of a long sentence. Then Godwin asked us if we thought we had got it right. We said we didn't know. Then he said, 'Let's see: I will read it just as you have translated it'. This he did, and then we could see that we had not made the least approach to anything that was intelligible. So we had to confess that we could only make nonsense of it. Then he began, and translated the whole passage correctly for us, using very nearly the same words that we had used, but arranging them in a different order, and showing us that the very ideas involved and the whole construction of the sentence was totally different from anything we had imagined. He did all this in a good-humoured way, as if pitying us for being put on a task so much beyond us. . . . I felt, however, that if we had had Godwin for our Latin teacher from the beginning, we should have had a much better chance of really learning the language. . . .

Next to Latin grammar the most painful subject I learnt was geography. It consisted almost entirely in learning by heart the names of the chief towns, rivers, and mountains. . . . It was something like learning the multiplication table, both in the painfulness of the process and the permanence of the results. The incessant grinding in both, week after week and year after year, resulted in my knowing both the product of any two numbers up to 12, and the chief towns of any English county so thoroughly, that the result was automatic, and the name of Staffordshire brought into my memory Stafford, Lichfield, Leek, as surely and as rapidly as 8 × 7 brought 56. The labour and mental effort to one who like myself had little verbal memory was very painful, and though the result had been a somewhat useful acquisition during life, I cannot but think that the same amount of mental exertion wisely directed might have produced far greater and more generally useful results. When I had to learn the chief towns of the provinces of Poland, Russia, Asia Minor, and other parts of Western Asia, with their almost unpronounceable names, I dreaded the approaching hour, as I was sure to be kept in for inability to repeat them. . . . No interesting facts were ever given in connexion with these names, no accounts of the country by travellers were ever read, no good maps ever given us, nothing but the horrid stream of unintelligible place-names, to be learnt in their due order as belonging to a certain country.

History was very little better, being largely a matter of learning by heart names and dates, and reading the very baldest account of the doings of kings and queens, of wars, rebellions, and conquests. Whatever little knowledge of history I have ever acquired has been derived more from Shakespeare's plays and from good historical novels than from anything I learnt at school. . . .

During my last year's residence[1] at Hertford an arrangement was made by which, I suppose, the fees paid for my schooling were remitted on condition that I assisted in the school. . . . Although I had no objection whatever to the work itself, the anomalous position it gave me in the school—there being a score of boys older than myself who were scholars only—was exceedingly distasteful. It led to many disagreeables, and subjected me to painful insinuations and annoying remarks. I was especially sensitive to what all boys dislike, the being placed in any exceptional position, or having to do anything different from other boys, and not of my own choice. Every time I entered the schoolroom I felt ashamed, and whether I was engaged at my own lessons, or occupied as a teacher, I was equally uncomfortable. I cannot now remember all the details of what to me was a constant humiliation, but I am sure it must have been a time of very real mental anguish from one result that persisted almost into middle life. For at least 20 years . . . I was subject to frequently recurring dreams of still having to go to school in the hybrid position of pupil and teacher.

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[1] When he was 13–14.

Even in my home life I was subject to impressions of the same general nature, but far less severe. Many slight faults of conduct which had been long overlooked were often suddenly noticed, and I was ordered at once to change them. One such was that I had been accustomed to use my spoon at table with my left hand, when I was one day told to use my right. No doubt I could have done this without much trouble, but I seemed to feel that to make such a change would be singular, would draw the attention of my brothers and sisters to me, and would be a kind of confession of ignorance or clumsiness which I could *not* make. I felt too much ashamed to do it. I put down my spoon and waited, and when I thought no one was looking, took it up again in the way forbidden. This was said to be obstinacy, but to me it seemed something else which I could hardly describe. However, the result was that I was sent away from table up to my bedroom, and was ordered to have my meals there, till I would ' do as I was bid '. I forget exactly how it ended, but I think I remained under this punishment several days, and it was only under the kind persuasions and advice of my mother and sisters that I was at length allowed to come down ; and this was the most terrible ordeal of all, and when I actually took the spoon in my right hand, I felt more hurt and ashamed than when I was sent away from table. This is only an example of numbers of little things of a similar character, which were treated in the same rough and dogmatic manner, which was then almost universal, and was thought to be the only way of training children. . . .

One other case of this kind hurt me dreadfully, because it exposed me to what I thought was the ridicule of the whole school. Like most other boys I was reckless about my clothes, leaning my elbows on the desk till a hole was worn in my jacket. . . . As new clothes were too costly to be had very often, my mother determined to save a jacket just taken for school wear by making covers for the sleeves which I was to wear in school. These were made of black calico, reaching from the cuff to the elbow, and though I protested that I could not wear them, that I should be looked upon as a guy, and other equally valid reasons, they were one day put in my pocket, and I was told to put them on just before I entered the school. Of course I could *not* do it, so I brought them back and told my mother. Then, after another day or two of trial, the dreaded thunderbolt fell upon me. On entering school I was called up to the master's desk, he produced the dreaded calico sleeves, and told me that my mother wished me to wear them to save my jacket, and told me to put them on. Of course I had to do so. They fitted very well, and felt quite comfortable, and I dare say did not look so very strange. I have no doubt also that most of the boys had a fellow feeling for me, and thought it a shame to make me an exception to all the school. But to me it seemed a cruel disgrace, and I was miserable so long as I wore them. . . . I do not think it was very long. . . . But while it lasted it was, perhaps, the severest punishment I ever endured.

## II

As the period from the age of 6 to 14, which I spent at Hertford, was the whole of my home life . . . I think it well to devote . . (another) chapter to it.

During the year or two spent at the first house . . . in St. Andrew's Street, very little occurred to impress itself upon my memory, partly I think because I was too young, and had several playfellows of my own age, and partly perhaps because the very small house and yard . . . offered few facilities for home amusements. There was also at that time too much inequality between myself and my brother John[1] for us to become such constant companions as we were a little later.

When we moved to the house beyond the old Cross, . . . the house itself was a more commodious one. . . . But the most interesting feature of the premises to us two boys was a small stable with a loft over it, which we had practically to ourselves. . . This place was our greatest delight, and almost all the hours of daylight we could spare from school and meals were spent in it. Here we accumulated all kinds of odds and ends that might be useful for our various games and occupations, and here we were able to hide many forbidden treasures such as gunpowder, with which we used to make wild fires, as well as more elaborate fireworks. John was of a more mechanical turn than myself, and he used to excel in making all the little toys and playthings in which boys then used to take delight. I, of course, looked on admiringly, and helped him in any way I could. I also tried to imitate him, but only succeeded in some of the simpler operations. Our most valuable guide was the *Boy's Own Book*, which told us how to make numbers of things boys never think of making now, partly because everything is made for them. . . .

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[1] John (born 1818) was 10, Alfred 5, in 1828, at the removal to Hertford. At the time of the second move, they were 12 and 7 respectively.

[They made fireworks, little cannon, popguns, spring pistols, and balls.] Other house occupations which employed much of our spare time in wet weather and in winter were the making of cherry-stone chains and bread seals. . . . We collected some hundreds of cherry-stones in the season. These, with much labour and scraping of fingers, were ground down on each side until only a ring of suitable thickness was left. The rings were then soaked in water for some days, which both cleaned and softened them, so that with a sharp penknife they could be cut through, and by carefully expanding them the next ring could be slipped in, the joint closing up so as to be scarcely, if at all, visible. When nicely cleaned, . . . these chains made very pretty and useful watch-guards, or even necklaces for little girls of our acquaintance.

Bread seals were easier to make, and more interesting in their results. In those ante-penny postage days, envelopes were unknown. . . . Almost every letter therefore was sealed. . . . In such a case we begged for the seal to be carefully cut round, so that we might make a copy of it. To do this we required only a piece of the crumb of new bread, and with cleanly washed hands we worked this up with our fingers till it formed a stiff compact mass. Before doing this we begged a little bright water-colour, carmine or Prussian blue, from our sisters, and also, I think, a very small portion of gum. When all was thoroughly incorporated, . . . we divided it into balls about the size of a large marble, and carefully pressed them on to the seals, at the same time squeezing the bread up between our fingers into a conical shape to form the upper part of the seal serving as a handle. . . . Each seal was then carefully put away to dry for some days, when it got sufficiently hard to be safely removed. It was then carefully trimmed round with a sharp penknife, and accurately shaped to resemble the usual form of the gold or silver seals which most persons carried on their watchchains to seal their letters. The seal itself would be perfectly reproduced, . . . and when still more hardened by thorough drying, would make a beautiful impression in sealing-wax. In this way we used to get quite a collection of ornamental seals, which, if carefully preserved, would last for years.

Almost all the above amusements and occupations were carried on in the stable and loft. . . . After that, my brother John [1] went to London, and was apprenticed to a builder to learn carpentry. . . . When left alone at home, . . . I gave up most of those occupations, and began to develop a taste for reading.

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## 8

[T. Hughes, *Memoir of a Brother*, p. 2 (1873).]

T. Hughes (1822–96) has left an account of his youth in *A Memoir of a Brother*, quoted here, and another, more imaginative version in the book that has made him famous, *Tom Brown's Schooldays*. George is supposed to have been the chief model for Tom Brown himself.

The memoir opens at the home of Squire Hughes at Uffington. The relation of the two brothers should be compared with that of Thomas and William De Quincey. (No. 10.)

The memories of our early childhood and boyhood throng upon me, so that I scarcely know where to begin or what to leave out, I cannot, however, I am sure, go wrong in telling you how I first became aware of a great difference between us, and the effect the discovery had on me. In the spring of 1828, when he was 7 and I 6 years old, our father and mother were away from home for a few days. We were playing together in the garden, when the footman came up to us . . . and asked us whether we shouldn't like to go rook-shooting. We jumped at the offer, and trotted along by his side to the rookery. As we came up, we saw a small group of our friends under the trees—the groom, the village schoolmaster, and a farmer or two—and started forwards to greet them. Just before we got to the trees, some of them began firing up at the young rooks. I remember, even now, the sudden sense of startled fear that came over me. My brother ran in at once under the trees, and was soon carrying about the powder horn from one to another of the shooters. I tried to force myself to go up, but could not manage it. Presently he ran out to me, to get me to go back with him, but in vain. I could not overcome my first impression, and kept hovering round, at a distance of thirty or forty yards, until it was time for us to go back ; ashamed of myself, and wondering . . . why it was that he could go in amongst that horrible flashing and smoke, and the din of firing, and cawing rooks, and falling birds, and I could not.

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[1] 'At the age of 14 or 15.'

I had encountered the same puzzle in other ways already. Some time before my father had bought a small Shetland pony for us, Moggy by name, upon which we were to complete our education in riding. . . So after our morning's lessons, the coachman used to take us to the paddock in which Moggy lived, put her bridle on, and leave us to our own devices. I could see that that moment was, from the first, one of keen enjoyment to my brother. He would scramble up on her back, without caring to bring her to the elm stool in the corner of the field which was our mounting-place—pull her head up, kick his heels into her sides, and go scampering away round the paddock with the keenest delight. He was Moggy's master from the first day. . . . She knew it quite well, and, just as well, that she was mistress as soon as I was on her back.

For weeks it never came to my turn without my wishing myself anywhere else. George would give me a lift up, and start her. She would trot a few yards, and then begin grazing, notwithstanding my timid expostulations and gentle pullings at the bridle. Then he would run up and pull up her head and start her again, and she would bolt off with a flirt of her head, and never be content until I was safely on the grass. . . .

And so it was with all our games and exercises. . . . He seemed to lay hold of whatever he put his hand to by the right end, and so the secret of it delivered itself up to him at once. . . .

Now, I could never have acquired this natural gift, but, by having an example of it constantly before my eyes, I got the next best thing, which was a scorn of myself for feeling fear. This by degrees hardened into the habit of doing what I saw him do, and so I managed to pass through school and college without betraying the timidity of which I was ashamed. Why do I make the confession now to you? Because I see the same natural differences in you that there were in us. One or two of you are naturally courageous, and the rest as naturally timid as I was. The first, I hope, will always bear with the others, and help them, as my brother helped me. If he had twitted me because I could not come under the trees at the rook-shooting, or because I was afraid of Moggy, I should probably never have felt the shame, or made the exertion necessary, to overcome my natural timidity. . . .

But there was another natural difference between us, . . . and that was, that he was remarkably quiet and reserved, and I the reverse. When we came down to dessert, after a dinner party, and had to stand by our father's side, . . and say to each guest in turn, 'Your good health, Sir, or Madam,' while we sipped a little sweet wine and water, the ceremony was a torture to him, while to me it was quite indifferent, and I was only running my eye over the dishes, and thinking what I should choose when it came to my turn. . . . I remember an old yeoman, a playfellow of my father's, who lived in a grey gabled house of his own at the end of the village in those days, and with whom we used to spend a good deal of our spare time, saying to a lady about her sons, 'Bring 'em up sarcy (saucy), Marm! I likes to see bwoys brought up sarcy.' I have no doubt that he and others used to cultivate my natural gift of sauciness, and lead me on to give flippant answers, and talk nonsense. In fact, I can quite remember occasions of the kind, and George's quiet steady look at them, as he thought, no doubt, 'What a fool my brother is making of himself, and what a shame of you to encourage him.' . . .

Now, the moment we got to school,[1] my sauciness abated very rapidly on the one hand, and, on the other, I became much more consciously beholden to him. We had scarcely been there a week when the first crisis occurred which made us both aware of this fact. My form had a lesson in early Greek History to get up, in which a part of the information communicated was, that Cadmus was the first man who 'carried letters[1] from Asia to Greece'. When we came to be examined, the master asked us, 'What was Cadmus?' This way of putting it puzzled us all for a moment or two, when suddenly the words 'carried letters' came into my head, and, remembering the man with the leather bag who used to bring my father's papers and letters, and our marbles and whipcord from Faringdon, I shouted, 'A postman, Sir'. The master looked very angry for a moment, but, seeing my perfect good faith, . . . he burst out laughing. Of course all the boys joined in, and when school was over I was christened Cadmus. That I probably should not have minded, but it soon shortened into 'Cad', at which all the blood in my eight-year-old veins was on fire. The more angry I was, the more some of the boys persecuted me with the hateful name, especially one stupid big fellow of twelve or so who ought to have been two forms higher, and revenged himself for his place amongst us little ones by making our small lives as miserable as he could. A day or two after, . . . he had got me into a corner of the playground into which he kept thrusting me back, calling me 'Cad, cad', while I was ready to fly at his throat and kill him. Suddenly we heard a step bearing down the gravel walk, and George, in his shirt sleeves, fresh from a game of rounders, rushed into the circle, and sent my tyrant staggering back with a blow in the chest, and then faced him with clenched fists, and a blaze in his eye, which I never saw there more than two or three times. . . . So my persecutor slunk off . . . and I strutted out of my corner, while George went back to his rounders, after looking round and saying, 'Just let me hear any of you call my brother "Cad" again'. I don't think I ever heard *that* nickname again at our first school, and it must have been very shortly after that he wrote home, 'I find I like Tom better at school than I do at home, and yet I do not know the reason'.

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[1] When they were 7 and 8 years old.

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[1] i.e. knowledge of the alphabet.

## 9

[G. Tyrrell, *Autobiography*, i.]

George Tyrrell (1861–1907) and his brother William, 10 years older than he, and Louisa, his sister, were brought up by his mother, a widow, in Dublin. All three children had a somewhat scrambling childhood. Rathgar Villa was only one of many ramshackle homes, which they inhabited for a little while about 1867. The extract refers to 1867–70.

The schooldays which followed were also unsatisfactory. George Tyrrell was never interested in the least in the work. The extract should be compared with no. 4 and no. 13.

Now in a certain sense my life had begun at Rathgar Villa;[1] a fact which agrees with the received view that children reach the age of reason at 7 or 8 years old.

I do not say I was irresponsible or incapable of isolated sins before that time, but it seems to me it was there that I first felt vaguely that one had the making of oneself in one's own hands—a character to build up, a course to shape, an end to select. Not that I had then selected or could select; but that I felt it had to be done. Previously there was the choice of good and bad acts ending with themselves; now it was a choice of acts opening up paths and entailing a universal principle of action. Formerly it was a question of this lie; now of lying. This, as far as I can remember and analyse, is the sort of change that came over me. I seemed to feel myself 'qualified' and characterized by my faults and sins. Up to this, my seeming action had been mostly the passive reaction of my inherited nature to its circumstances and conditions. Now I began to understand that, just as I should not let my nails grow wild, but must pare them or bite them, so with my disposition and character; I had to mould it one way or another, regularly or irregularly.

I find it hard to fix on the exact change of circumstances that lifted me into this new plane of existence; but I am inclined to connect it with my first systematic and sustained courses of disobedience of one kind or another. The perfectly obedient and passive 'good child' has usually no occasion of responsible and independent action, whereas a raid on the orchard . . . or some other petty villainy breaks the young twig from the parent stem, and sets it in opposition as a distinct personality. . . . I do not mean to say that corruption is the needful condition of self-awakening; but that it is often the *de facto* condition. Wise education would never think it too soon to rouse the sense of responsibility in some healthy way, but ignorance and innocence, inertia and virtue, are usually confounded at present. The principle of never doing for children what they can reasonably do for themselves cannot be applied too soon or too rigorously; every departure from it is a weakening of character. And so here I draw a black line to mourn my departed innocence.

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[1] At 7 or 8 years old.

It was now judged fit I should go to school. . . . Dr. North, to whose school my brother went, had a preparatory class, . . . and there first I faced the world in the form of a dozen little brats, whose names and natures I remember but need not retail. We sat on three forms, making a broken square, and . . . Miss Ball was enchaired where the fourth side should have been. . . . Thanks to my mother's teaching, I easily passed as a 'good boy', and was only once in jeopardy of Miss Ball's cane, owing to my holding my pen as I hold it at this moment, close to the point, between index and thumb. Do writing masters never reflect that hands are constructed differently? When I held it in the orthodox fashion my hand shook and large blobs of ink defiled the virgin page, for which I got scolded. Hence I learned to keep my eye on Miss Ball, and when she looked at me I held my pen correctly, and affected abstraction, as it were, pausing in my labour; when she looked away, I produced satisfactory results in my own unorthodox way. My God! how like my present methods!

. . . It was not my mother's fault if I did not know my lessons. Every morning, after breakfast, she drilled me in my declensions and other tasks, which I was piously believed to have prepared the night before. But I was fond of play and hated books, and, to avoid my mother's anger, I would often pretend that the appointed lesson was a repetition of the previous one which I knew. Hence catastrophes at school, . . which of course perplexed my mother. . . . But being a clever child, I applied to deceit the industry I should have applied to my books, and was rarely detected if at all. . . . My mother began to resign herself to the fact that I was rather a stupid boy, little knowing that my cleverness had simply been directed into a wrong channel. I never had the brains of my brother Willie, but had I been *interested* in books, I should have done very well, if not brilliantly. But no attempt was made to get me interested, whereas my plays and diversions gave scope for my natural inventiveness and imagination. Thus it was, I think, that I began to cut myself off, and lead a secret scheming life of my own.

To make, construct, produce, was then, as ever since, the dominant need and desire of my life. My mother always considered me destructive, for my few weekly pence (2*d.* a week, later raised to 3*d.*) always went in toys, which were soon subjected to a searching analysis, and reduced to their primitive elements. . . To make the like and improve on it was really the motive of all my destruction. If my educators had only understood this propensity, and made it the basis of my mental training, what wasted years would have been saved!

Though I was not a 'gamester', and thereby shut myself off from the chief current of school life, yet I think I was the most universally liked boy in the school from my ninth year onwards. . . . When the needs of mere animal exercise were satisfied what I liked best was talk—not wise and erudite talk, but satire, badinage, humbug of all sorts; but my real solitary serious diversion was tinkering, inventing, contriving. That I was too poor to have any tools or materials was undoubtedly an advantage, as I had to stretch my imagination to make bricks without straw. But my uncle . . . used to let me come and rummage in his drawers of débris, and go away laden with anything that looked interesting, either as apt for some purpose already conceived, or as suggestive of some new purpose. . . When I ought to have been at my lessons, I would go to my room, pull out my box of treasures, turn them over, and think and think 'what would fit on to what'. Sometimes, having fixed upon the end, I would search for the means; sometimes, in handling the means, I would stumble on some end I had not thought of. . . . The mania grew and lasted until I was fourteen or fifteen, when the propensity was diverted into other channels. It ruined my studies, not merely by the time idled away, but by the continual preoccupation, which excluded other interests.

I used, till lately, to think Willie had a great pull over me in an accurate and retentive memory, but now I recognize that my bad memory is an acquired defect, due to habits of slothfulness and self-indulgence in the very first years, and to my neglect of systematic and persevering study ; in fact, due to an unmortified and undisciplined imagination. For things I am interested in I have an excellent memory, but they are not many ; and for other matters I have absolutely none. Thus, I have a memory for the structural and philosophic part of a language, but none for the vocabulary ; and so, in other things, perception and memory go together. The real injury lies in my acquired *inability* to notice or attend to things I am not interested in—which is the primary requisite of education. And besides noticing, there is a habit of noting or recording in which again I am woefully deficient for the same reason—a habit, as it were, of repeating or retailing a thing to oneself as one notices it bit by bit. This I can do expressly when there is a motive, but not habitually and instinctively ; and at the end of an absorbing novel I could rarely give even a coherent outline of its plot. For I have read *The Mill on the Floss* seven or eight times, but could not now give an analysis of its plot except by raking my memory and putting the results together, as I am now doing with this story of my own life.

[The following notes relate to the time when George Tyrrell was about 14. He was then boarding at the house of his master in Dublin. His brother Willie lived hard by, at Trinity College.]

I used to go to Willie's rooms frequently to earn certain *honoraria* for cutting books, he being as inept as I was expert at such processes. Hence, in spite of myself, I had at least to get to know their names and a minimum of their general nature. Then, one dreary Sunday afternoon, I was rummaging over Mr. P.'s bookcase from sheer listlessness, when I lit on *Butler's Analogy*, which I recognized as one of the books I had operated on. I turned to Mr. P., and said, 'May I take this out, Sir ?'

He said, ‘ Yes, certainly ; but you will not understand a word of it ’. I resented the insult quietly, and stuck to the book till I had, at least, got through it. I saw him eyeing me as, day by day, I ostentatiously brandished my Butler, and sat down to it in the window in the intervals when we were expected to keep quiet and read what we liked. As for my companions, they knew I was quite incalculable, and made no comment, for I was miles ahead of them all in reflection, in spite of my piggish ignorance, and they always felt it ; as though I had an extra eye of some kind. I never bothered them with it, and ‘ put on ’ about it, but used it simply for their amusement, if at all. The average boy is so utterly wanting in speculation that he is glad of an oracle, if he can escape a prig and a bore. As to the general purport of the *Analogy*, . . . I had no conception whatever. What I did apprehend were certain particular arguments, like that which Bishop Butler brings for the survival . . . of the soul, and a few other of the simpler and less subtle reasonings. . . . But the real use I got from it was the knowledge that religion could be soberly defended upon a rational basis at all ; though I knew that Willie had been all through this, and was still an unbeliever. Shortly after, in his rooms, I took care to allude casually to what I had been reading. He laughed and asked me a few questions, and was greatly surprised to find how much I had got hold of ; but he also took care to show me that the arguments were not worth much. Yet the hope that the light, which I was blindly groping after from the dawn of reason, might really be reached in this way, was kindled ; and the constructiveness, which heretofore went exclusively to mechanical effort, was now partly, later wholly, diverted to philosophical effort. These were the rude beginnings of such a mind as I have since endeavoured to build up.

(*By kind permission of Mr. Edward Arnold.*)

## 10

[De Quincey, *Autobiography* (1853–60).]

Thomas de Quincey (1785–1859) was the child of a prosperous Manchester merchant, whose house, Greenhay, has given its name to one district of Manchester. Thomas’s elder brother, William, was born in 1780, Thomas in 1785 ;

and there were two younger brothers, Richard and Henry, and two younger sisters, Mary and Jane.

These were the inhabitants of the nursery when Thomas was 6.

In 1809 Thomas settled at Grasmere, for Wordsworth's sake, and wrote the magnificent *Confessions of an Opium Eater* in 1822.

## I

My brother (also) was a stranger (to me).

In an early stage of his career, he had been found wholly unmanageable. His genius for mischief amounted to inspiration; it was a divine afflatus which drove him in that direction, and such was his capacity for riding in whirlwinds and directing storms, that he made it his trade to create them, . . . in order that he might direct them. For this, and other reasons, he had been sent to the Grammar School of Louth, in Lincolnshire. . . .

Fresh from such a training as this, and at a time when his additional five or six years availed nearly to make his age double mine, my brother very naturally despised me; and, from his exceeding frankness, he took no pains to conceal that he did. Why should he? Who was it that could have a right to feel aggrieved by his contempt? Who, if not myself? But it happened, on the contrary, that I had a perfect craze for being despised. I doted on it; and considered contempt a sort of luxury that I was in continual fear of losing. . . . To me, at that era of life, it formed the main guarantee of an unmolested repose, and security there was not, on any lower terms. . . . The slightest approach to any favourable construction of my intellectual pretensions alarmed me beyond measure; because it pledged me in a manner with the hearer to support this first attempt by a second, by a third, by a fourth—O Heavens! there is no saying how far the horrid man might go in his unreasonable demands upon me. . . But I nipped the system of extortion in the bud, by refusing to take the first step. Still, with all this passion for being despised, which was so essential to my peace of mind, I found at times an altitude in the station of contempt for me assumed by my brother that nettled me. Sometimes, indeed, . . . when my superiority in some bookish accomplishments displayed itself, by results that could not be entirely dissembled, mere foolish human nature forced me into some trifle of exultation at these retributory triumphs. But more often I was disposed to grieve over them. They tended to shake that solid foundation of utter despicableness upon which I relied so much for my freedom from anxiety; and therefore, upon the whole, it was satisfactory to my mind that my brother's opinion of me, after any little transient oscillation, gravitated . . . back towards that settled contempt. . . . The pillars of Hercules upon which rested the vast edifice of his scorn were these two: first, my physics—he denounced me for effeminacy; second, he assumed, and even postulated as a datum, which I myself could never have the face to refuse, my general idiocy. Physically, therefore, and intellectually, he looked upon me as below notice; but morally, he assured me that he would give me a written character of the very best description, whenever I chose to apply for it. . . .

This eldest brother of mine was in all respects a remarkable boy. Haughty he was, aspiring, immeasurably active, fertile in resources as Robinson Crusoe; but also full of quarrel as it is possible to imagine; and, in default of any other opponent, he would have fastened a quarrel upon his own shadow for presuming to run before him when going westwards in the morning. . . . Books he detested, one and all, excepting only such as he happened to write himself. And these were not a few. On all subjects known to man, from the Thirty-Nine Articles of our English Church, down to pyrotechnics, legerdemain, magic both black and white, thaumaturgy, and necromancy, he favoured the world (which world was the nursery where I lived amongst my sisters) with his select opinions. On this last subject especially—of necromancy—he was very great; witness his profound work, though but a fragment—'How to raise a ghost; and, when you've got him, how to keep him down.' . . .

For some time he turned his thoughts to philosophy, and read lectures to us every night upon some branch or other of physics. The undertaking arose upon some one or other of us envying or admiring flies for their power of walking upon the ceiling. 'Pooh!' he said, 'they are impostors; they pretend to do it, but they can't do it as it ought to be done. Ah! you should see *me*, standing upright on the ceiling, with my head downwards, for half an hour, meditating profoundly.'

My sister Mary remarked that we should all be very glad to see him in that position.

'If that 's the case,' he replied, 'it 's very well that all is ready, except as to a strap or two.'

Being an excellent skater, he had first imagined that, if held up until he had started, he might then, by taking a bold sweep ahead, keep himself in position through the continued impetus of skating. But this he found not to answer; because, as he observed, 'the friction was too retarding from the plaster of Paris; but the case would be very different if the ceiling were coated with ice!'

As it was *not*, he changed his plan. The true secret, he now discovered, was this; he would consider himself in the light of a humming top; he would make an apparatus (and he made it) for having himself launched (like a top) upon the ceiling, and regularly spun. . . The principle was now discovered; 'and of course,' he said, 'if a man can keep it up for five minutes, what's to hinder him from doing so for five months?'

'Certainly nothing that I can think of', was the reply of my sister, whose scepticism, in fact, had not settled upon the five months, but altogether upon the five minutes. The apparatus for spinning him, however, perhaps from its complexity, would not work, a fact evidently owing to the stupidity of the gardener. . . . However, as some compensation, he proposed to improve the art of flying, . . . and, in the meantime, he resumed his general lectures on physics. From these, however, he was speedily driven . . . by a concerted assault of my sister Mary's. He had been in the habit of lowering the pitch of his lectures with ostentatious condescension to the presumed level of our poor understandings. This superciliousness annoyed my sister; and accordingly, with the help of two young female visitors, and my next younger brother, . . . she arranged a meeting, that had the unexpected effect of suddenly extinguishing the lectures for ever. He had happened to say (what was no unusual thing with him) that he flattered himself he had made the point under discussion tolerably clear, 'clear', he added, bowing round the half-circle of us, the audience, 'to the meanest of capacities', and then he repeated, sonorously, 'clear to the most excruciatingly mean of capacities'. Upon which, a voice, a female voice, . . . retorted, 'No, you haven't; it's as dark as sin'; and then, without a minute's interval, a second voice exclaimed, 'Dark as night'; then came my younger brother's insurrectionary yell: 'Dark as midnight'; then another female voice chimed in melodiously, 'Dark as pitch'. . . . After my brother had recovered from his first astonishment at this audacious mutiny, he made us several sweeping bows, . . . and then addressed us in a very brief speech, of which we could distinguish the words 'pearls' and 'swinish multitude', but uttered in a very low key. . . . We all laughed in chorus at this parting salute; my brother himself condescended at last to join us; but ended the course of lectures on natural philosophy.

## II

Such, according to the rapid sketch which at this moment my memory furnishes, was the brother who now first laid open to me the gates of war. The occasion was this.

He had resented, with a shower of stones, an affront offered to us by an individual boy belonging to a cotton factory; for more than two years afterwards, this became the cause of a skirmish or a battle as often as we passed the factory, and *this*, unfortunately, was twice a day. . . .

. . . As we passed the bridge, a boy happening to issue from the factory sang out to us derisively, 'Hullo, Bucks!'[1] . . . The next moment he discovered our boots, and he consummated his crime by saluting him as 'Boots! Boots!' My brother made a dead stop, surveyed him with intense disdain, and bade him draw near, that he might 'give his flesh to the fowls of the air'. The boy declined to accept this liberal invitation, and conveyed his answer by a most contemptuous and plebeian gesture, upon which my brother drove him in with a shower of stones.

During this inaugural flourish of hostilities, I, for my part, remained inactive, and therefore apparently neutral. But this was the last time I did so: for the moment, indeed, I was taken by surprise. To be called a buck by one that had it in his choice to have called me a coward, a thief, or a murderer, struck me as a most pardonable offence; and as to boots, that rested upon a flagrant fact that could not be denied; so that at first I was green enough to regard the boy as very considerate and indulgent. But my brother soon rectified my views; or, if any doubts remained, he impressed me, at least, with a sense of my paramount duty to himself, which was threefold.

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[1] 'We wore trousers (at that time unheard of, except among sailors), and we also wore Hessian boots.' The date must have been about 1791–2, as De Quincey was about 6–7 years old, and was born in 1785.

First it seemed that I owed military allegiance to him, as my commander-in-chief, . ; secondly, by the law of nations, I, being a cadet of my house, owed suit and service to him who was its head; and he assured me, that twice in a year, on my birthday and on his, he had a right, strictly speaking, to make me lie down, and to set his foot upon my neck; lastly, by a law not so rigorous . . . but valid amongst gentlemen, . . . it seems I owed eternal deference to one so much older than myself, so much wiser, stronger, braver, more beautiful, and more swift of foot.

Something like all this in tendency I had already believed. . . . By temperament, and through natural dedication to despondency, I felt resting upon me always too deep and gloomy a sense of obscure duties attached to life, that I never *should* be able to fulfil. . . Glad therefore I was to find the whole tremendous weight of obligations all crowded into this one pocket command, 'Thou shalt obey thy brother as God's vicar upon earth.' . . .

From this day, therefore, I obeyed all my brother's military commands with the utmost docility. . . .

We fought every day, and, generally speaking, twice every day, and the result was pretty uniform, viz. that my brother and I terminated the battle by insisting on our undoubted right to run away.

## III

Both my brother and myself, for the sake of varying our intellectual amusements, occupied ourselves at times in governing imaginary kingdoms. I do not mention this as anything unusual; it is a common resource of mental activity and of aspiring energies among boys. Hartley Coleridge, for example, had a kingdom which he governed for many years; whether well or ill I am unable to say. . . .

My own kingdom was an island called Gombroon. But in what parallel of north or south latitude it lay, I concealed for a time as rigorously as ancient Rome . . . concealed her real name. The object . . . was, to regulate the position of my own territory by that of my brother's; for I was determined to place a monstrous world of waters between us, as the only chance (and a very poor one it proved) for compelling my brother to keep the peace. At length, for some reason . . ., he located his capital city in the high latitude of 65 degrees north. That fact being once published and settled, instantly I smacked my little kingdom of Gombroon down into the tropics, 10 degrees, I think, south of the line. . . .

But my brother stunned me by explaining that although his capital lay in latitude 65 degrees north, not the less his dominions swept southwards through a matter of 80 or 90 degrees; and, as to the Tropic of Capricorn, much of it was his own private property. I was aghast at hearing *that*. It seemed that vast horns and promontories ran down from all parts of his dominions towards any country whatsoever, in either hemisphere—empire, or republic, monarchy, polyarchy, or anarchy, that he might have reasons for assaulting.

Here in one moment vanished all that I had relied on for protection: distance I had relied on, and suddenly I was found in close neighbourhood to my most formidable enemy. Poverty I had relied on, and *that* was not denied; he granted the poverty, but it was dependent on the barbarism of the Gombroonians. It seems that in the central forests of Gombroonia there were diamond mines, which my people, from their low condition of civilization, did not value, nor had any means of working. Farewell, therefore, on my side, all hopes of enduring peace!

Still, it may be fancied that, since all the relations between us . . rested upon our own representations . . . it was surely within my competence to deny or qualify, as much as within his to assert. But, in reality, the *law* of the contest between us, as suggested by some instinct of propriety in my own mind, would not allow me to proceed in such a method. What he said was like a move at chess or draughts, which it was childish to dispute. The move being made, my business was—to face it, to parry it, to evade it, and, if I could, to overthrow it.

'How, and to what extent,' my brother asked, 'did I raise taxes upon my subjects?' My first impulse was to say, that I did not tax them at all, for I had a perfect horror of doing so; but prudence would not allow of my saying that; because it was too probable he would demand to know how, in that case, I maintained a standing army; and if I once allowed it to be supposed that I had none, there was an end for ever to the independence of my people. . . . I took some days, therefore, to consider that point, but at last replied that my people, being maritime, supported themselves mainly by a herring fishery, from which I deducted a part of the produce, and afterwards sold it for manure to neighbouring nations. This last hint I borrowed from the conversation of a stranger who happened to dine one day at Greenhay. . . . My brother observed derisively, much to my grief, that a wretched fish-eating people must make shocking soldiers, weak as water, and liable to be knocked over like ninepins. . . .

At every step I had to contend for the honour and independence of my islanders. . . . Oh, reader, do not laugh! I lived for ever under the terror of two separate wars in two separate worlds, one against the factory boys, in a real world of flesh and blood, of stones and brickbats, of flight and pursuit, that were anything but figurative; the other in a world purely aerial, where all the combats and the sufferings were absolute moonshine. And yet the simple truth is—that, for anxiety and distress of mind, the reality . . . was as nothing in comparison of that dream kingdom which rose like a vapour from my own brain, and which apparently by the fiat of my will could be for ever dissolved.

## 11

[T. de Quincey, *Confessions of an Opium Eater* (World's Classics), pp. 220 and 263.]

### (*a*) *The Sources of the Imagery*

About 1803 Thomas De Quincey was in London, in a state of extreme poverty. Roaming about, he made acquaintance with a girl of 15, a little younger than himself. 'O noble minded Ann!' he calls her, and says:

> For many weeks I had walked, at nights, up and down Oxford Street with this poor friendless girl, or had rested with her on steps and under the shelter of porticos.

In 1816 De Quincey was living at Grasmere, in Dove Cottage, previously Wordsworth's home. He describes it thus:

> Let there be a cottage, standing in a valley, . . . no spacious valley, but about two miles long by three-quarters of a mile in average breadth. . . Let the mountains be real mountains, between three and four thousand feet high, and the cottage a real cottage. . . . Let it be, in fact (for I must abide by the actual scene), a white cottage, embowered with flowering shrubs, so chosen as to unfold a succession of flowers upon the walls, and clustering around the windows, through all the months of spring, summer, and autumn, beginning in fact with May roses, and ending with jasmine.

### (*b*) *The Dream*

I thought that it was Easter Sunday, and as yet very early in the morning. I was standing, as it seemed to me, at the door of my own cottage. Right before me lay the very scene which could really be commanded from that situation, but exalted, as was usual, and solemnized by the power of dreams. There were the same mountains, and the same lovely valley at their feet; but the mountains were raised to more than Alpine height, and there was interspace far larger between them of savannahs and forest lawns; the hedges were rich with white roses; and no living creature was to be seen, excepting that in the green churchyard there were cattle tranquilly reposing upon the verdant graves, and particularly round the grave of a child whom I had once tenderly loved,—just as I had really beheld them, a little before sunrise, in the same summer when that child died.

I gazed upon the well-known scene, and I said to myself, 'It yet wants much of sunrise . . . I will walk abroad . . . with the dew I can wash the fever from my forehead; and then I shall be unhappy no longer'. I turned, as if to open the garden gate, and immediately I saw upon the left a scene far different; but which yet the power of dreams had reconciled into harmony. The scene was an Oriental one; and there also it was Easter Sunday, and very early in the morning. And at a vast distance were visible, as a stain upon the horizon, the domes and cupolas of a great city—an image or faint abstraction, caught perhaps in childhood from some picture of Jerusalem. And not a bow-shot from me, upon a stone, shaded by Judaean palms, there sat a woman; and I looked, and it was—Ann! . . . Her face was the same as when I saw it last, the same, and yet, again, how different! . . . Sometimes she seemed altered, yet again sometimes not altered, and hardly older. . . .

Suddenly her countenance grew dim, and, turning to the mountains, I perceived vapours rolling between us; in a moment all had vanished; thick darkness came on, and in the twinkling of an eye I was far away from mountains, and by lamplight in London, walking again with Ann—just as we had walked, when both children, eighteen years before, along the endless terraces of Oxford Street.

## 12

[C. Darwin, *Life and Letters*, vol. i (1887).]

Autobiographical recollections written in 1876.

In the summer of 1818 I went to Dr. Butler's great school in Shrewsbury, and remained there for seven years, (until) . . . I was 16 years old. . . .

Nothing could have been worse for the development of my mind than Dr. Butler's school, as it was strictly classical, nothing else being taught, except a little ancient geography and history. The school as a means of education to me was simply a blank. . . . Much attention was paid to learning by heart the lessons of the previous day; this I could effect with great facility, learning 40 or 50 lines of Virgil or Homer whilst I was in morning chapel; but this exercise was utterly useless, for every verse was forgotten in 48 hours. I was not idle, and, with the exception of versification, generally worked conscientiously at my Classics, not using cribs. . . .

Looking back as well as I can at my character during my school life, the only qualities which at this time promised well for the future were, that I had strong and diversified tastes, much zeal for whatever interested me, and a keen pleasure in understanding any complex subject or thing. I was taught Euclid by a private tutor, and I distinctly remember the intense satisfaction which the clear geometrical proofs gave me.

. . . . . . . . . .

As it was decided that I should be a clergyman, it was necessary that I should go to one of the English universities and take a degree. But, as I had never opened a classical book since leaving school, I found to my dismay, that, in the two intervening years, I had actually forgotten, incredible as it may appear, almost everything which I had learnt, even to some few of the Greek letters. . . . I therefore worked . . . with a private tutor. . . . I soon recovered my school standard of knowledge, and could translate easy Greek books such as Homer and the Greek Testament, with moderate facility.

During the three years I spent at Cambridge, my time was wasted. . . . At Cambridge no pursuit . . gave me so much pleasure as collecting beetles. . . . I am surprised what an indelible impression many of the beetles which I caught at Cambridge left upon my mind. I can remember the exact appearance of certain posts, old trees, and banks, where I made a good capture. . . . I had never seen in those old days *Licinus* alive, which to an uneducated eye hardly differs from many of the black Carabidous beetles; but my sons found a specimen, . . . and I instantly recognized that it was new to me; yet I had not looked at a British beetle for the last twenty years.

Darwin's son wrote about him:

There was one quality of his mind which seemed to be of special advantage in making . . . discoveries. It was the power of never letting exceptions pass unnoticed. . . .

He often said that no one could be a good observer unless he was an active theorizer. This brings me back to what I said about his instinct for arresting exceptions; it was as though he were charged with theorizing power ready to flow into any channel on the slightest disturbance, so that no fact, however small, could avoid releasing a stream of theory, and thus the fact became magnified into importance. In this way it naturally happened that many untenable theories occurred to him; but fortunately his richness of imagination was equalled by his power of judging and condemning the thoughts that occurred to him. He was just to his theories, and did not condemn them unheard, and so it happened that he was willing to test what would seem to most people not at all worth testing. These rather wild trials he called 'Fool's experiments', and enjoyed exceedingly.

(*By kind permission of Mr. John Murray.*)

## 13

[Sir J. D. Astley, *Fifty Years of my Life* (1895).]

Sir John Astley (1828–94) was the eldest son of a Wiltshire baronet. In 1842 he was sent to a great public school, where he was entered in the house of a tutor named Goodford. To us the most interesting part of his school life is his relation towards the work of the school and its discipline. To him it was cricket, football, rowing, playing tricks, and cutting fagging. 'I was precious idle, did no more than I was obliged, and precious little of that!'

At Oxford his interest was the same, and so it is for us. The extract shows the reason for the failure both of school and of college.

I was precious idle, I am afraid, and did no more than I was obliged, and as little of that; but I was always very punctual. . . . At any rate, I found favour . . . in the eyes of Mr. Balston, who took my division in school, and, to my astonishment, he suggested 'sending me up for good'; but the event never came off, as he was unsuccessful in finding a copy of my verses which contained more than the regulation minimum of twelve.

Astley was moved up at the end of his first year at school. The quotation probably refers to a year or thereabouts after that.

Not long after this I narrowly missed taking my remove. I never was a flier at verses, but Welby . . . was, and I had arranged with him . . . to do my verses for me . . . at Trials. Of course I had to go into school, and was then handed some English prose to turn into Latin verse. . . . Well, I looked at the paper and saw that it was a bit beyond me, and so I went up to the master, and asked leave to fetch my Gradus, which I had purposely left at my tutor's. He said, ' Very well, but be quick '. . . . Off I started as hard as I could pelt, handed the paper to Welby, who soon knocked off 12 to 14 lines, with which . . . I bolted back into school. Now I had conceived the idea of putting them into my shoe, . . . thinking that I should not be so easily detected. This I did, and flattered myself upon my ingenuity.

. . . Then I began to turn over my Gradus with my left hand, while I proceeded to scratch my foot with my right, and at the same time to search for my verses. But O dear, O dear, they were gone, and I was in a nice mess ! I just managed to scrape through, but took a terrible bad place.

I am afraid I used to get very savage with old Goodford, as he was always pitching into me in the pupil room. I recollect one night when we were all playing at cards, that he sneaked along the passage very quietly with his little oil lamp, and almost caught us in the act. I think he must have had information how we worked it, for he walked straight into the room, . . . calmly noted that there were five or six of us present, and then went to the table where one boy was diligently reading the newspaper aloud, with his elbows resting upon it. It was no sort of good, however ; my tutor pulled the paper open and out came the cards. He then smiled grimly . . . and said with a gleam of satisfaction, ' This is what you were doing. . . . I shall complain of you all, to-morrow morning, and have you well flogged '. As far as I can remember he kept his word and it came off.

It is now nearly fifty years ago since this happened, but I can see the whole scene before me at this moment—the fiendish joy that lit up the old boy's face, and the despair which pervaded our countenances. . . . I never got on well with my tutor, and I do not think he liked me. It seems to me now he went the wrong way to work. He always wanted to catch you out through his own cunning, instead of appealing to your honour to avoid doing wrong. However, I had a real jolly time at school, and I must say there is no school like (it).

[After nearly four years at school, John Astley had to leave, to prepare for Oxford with a tutor.]

I went to Oxford University in the autumn of 1846, and matriculated as a gentleman commoner of Christ Church. . . . The sudden change from a boy's life with a small allowance . . . to a magnificent income of £400 a year and a servant had a bad effect on my previous economical style of living, and I launched out uncommon. But I have regretted it ever since, for I honestly look back on those twelve months I spent at Oxford as the worst time of my whole career, or, at any rate, the most wasted. I knew that I was only there for a short time,—in fact, until I got my commission in the Guards, so I did but little work, and verily believe I knew less when I left than when I went to Oxford.

I used frequently to shirk chapel, for I could not see the benefit likely to accrue from hearing a few prayers mumbled in Latin by some college official who seemed in as great a hurry . . . as I was. . . . I seldom went near 'Lectures', and consequently cannot recollect anything that went on there. Every Saturday I had to write a theme on some subject or another, and more than once I copied an article out of *Bell's Life*. . . . Occasionally the old Dean found me out, and I paid the penalty with 500 or 600 lines of Latin and Greek, all supplied at retail price by the faithful Boddington.[1]

[For one escapade] I was confined to walls . . . for the rest of the term. I had to employ all sorts of stratagems to get out of college without being detected, and one of my favourite dodges was to slip into Christ Church meadows, . . . from thence into a boat, in the bottom of which I laid snug, and covered by a sack or something of the kind, till a waterman rowed me down to a convenient spot for disembarkation. . . .

I had to get in, and as the College gates were shut at 9 p.m., and a porter was always on guard there, his vigilance had to be diverted by a pal, who would call his attention to the great Bear, . . . or perhaps an imaginary chimney on fire, and as soon as he moved sufficiently . . . 'through' I used to go with my gown

[1] 1*s*. 6*d*. per 100 Latin lines; 2*s*. per 100 for Greek.

over my head, so that he could not recognize me, and make for any one's rooms but my own, and, the oak once 'sported' (all College men know what this means), Cerberus was baffled, and I was safe; but, bless my soul! it took a lot of trouble, and entailed a deal of hard work.

. . . . . . . . . . .

At the end of the summer term (1847) I had to go in for 'Collections'; . . . but as I had persistently shirked Lectures . . . I felt that only a piece of real good luck could pull me through. The old Dean and three or four other learned Divines sat in a row on one side of the table, and on my being called up I was told to turn to a certain page and line of some Greek play, . . and ordered 'to construe till stopped'. I glanced down the page, and discovered that the subject was entirely unknown to me. However, I picked out two proper names, and at once decided in my own mind that they were the names of a soldier 'courting his gal', and proceeded glibly to fit in the context . . . but alas, I had not proceeded more than about five or six lines before the old Dean and his coadjutors were convulsed with laughter, and the former stopped me . . . by addressing me—'Sir, you are a most extraordinary young man, and evidently you are not aware that you have mistaken the names of two famous warriors setting forth to battle, for those of a man and woman ardently attached to each other. You are doing no good up here and I should really advise your going down.' . . .

The good old man did write to my father . . . and I left Oxford, and . . . I confess that I spent a most unprofitable time there. I found on reckoning up that my bills amounted to about four hundred pounds, . . . thus laying up the foundation of an amount of indebtedness that I have never really recovered from.

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## 14

[J. S. Mill, *Autobiography* (1873).]

From his earliest years J. S. Mill (1806–73) was the constant companion of his father, James Mill. James Mill had overpowering influence even upon men of his own age. He never relaxed his care of his son. When J. S. Mill was 3, he was learning Greek at his father's study table. When he was 12, he had read more Greek and Latin than most University students. Then he began classical and mediaeval logic, and political economy. Except his own brothers and sisters he knew very few children until he was 14. All his respect and all his admiration were concentrated upon his father, whom he did not love. This peculiar past must be borne in mind in reading the following extract :

> One of the evils most liable to attend on any sort of early proficiency . . . my father most anxiously guarded against. This was self-conceit. He kept me, with extreme vigilance, out of the way of hearing myself praised. . . . From his own intercourse with me, I could derive none but a very humble opinion of myself ; and the standard of comparison he always held up to me, was not what other people did, but what a man could and ought to do. He completely succeeded. . . . I was not at all aware that my attainments were anything unusual at my age. . . . My state of mind was not humility, but neither was it arrogance. . . . I neither estimated myself highly nor lowly ; I did not estimate myself at all. If I thought anything about myself, it was that I was rather backward in my studies, since I always found myself so, in comparison with what my father expected of me.
>
> I assert this with confidence, though it was not the impression of various persons who saw me in my childhood. They, as I have since found, thought me greatly and disagreeably self-conceited ; probably because I was disputatious, and did not scruple to give direct contradictions to things which I heard said. . . . My father did not correct this ill-breeding and impertinence, probably from not being aware of it, for I was always too much in awe of him to be otherwise than extremely subdued and quiet in his presence. Yet with all this, I had no notion of any superiority in myself, and well was it for me that I had not.
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> . . . . . . . . . .
>
> It is evident that this, among many other of the purposes of my father's scheme of education, could not have been accomplished if he had not carefully kept me from having any great amount of intercourse with other boys. He was earnestly bent upon my escaping not only the corrupting influence which boys

exercise over boys, but the contagion of vulgar modes of thought and feeling; and for this he was willing that I should pay the price of inferiority in the accomplishments which schoolboys . . . chiefly cultivate. The deficiencies in my education were principally in the things which boys learn from being turned out to shift for themselves, and from being brought together in large numbers.

During the winter of 1821–2 Mr. John Austin . . . kindly allowed me to read Roman law with him. It was at the commencement of these studies that my father put into my hands Bentham's principal speculations. The reading of this book was an epoch in my life; one of the turning points in my mental history.

My previous education had been, in a certain sense, already a course of Benthamism. The Benthamic standard of 'the greatest happiness' [of the greatest number] was that which I had always been taught to apply.

Yet in the first pages of Bentham it burst upon me with all the force of novelty. . . . The feeling rushed upon me that all previous moralists were superseded, and that here indeed was the commencement of a new era in thought. . . . I felt taken up to an eminence from which I could survey a vast mental domain, and see stretching out into the distance intellectual results beyond all computation. As I proceeded further, there seemed to be added to this intellectual clearness, the most inspiring prospects of practical improvement in human affairs. When I laid down the last volume, . . . I had become a different being. The 'principle of utility', understood as Bentham understood it . . . fell exactly in its place as the keystone which held together the detached parts of my knowledge and beliefs. It gave unity to my conceptions of things. I now had opinions; a creed, a doctrine, a philosophy, . . . a religion, . . . the diffusion of which could be made the principal outward purpose of a life. . . .

It was in the winter of 1822–3 that I formed the plan of a little society, to be composed of young men agreeing in fundamental principles, acknowledging utility as their standard in ethics and politics . . . and meeting once a fortnight to read essays and discuss questions. . . . The number never, I think, reached ten, and the society was broken up in 1826. . . . The chief effect of it . . . as regards myself, was that of bringing me in contact with several young men at that time less advanced than myself, among whom . . . I was for some time a sort of leader. . . . Any young man of education who fell in my way, and whose opinions were not incompatible with those of the society, I endeavoured to press into its service.

I conceive that the description so often given of a Benthamite as a mere reasoning machine . . . was during two or three years of my life not altogether untrue of me.

. . . My father's teaching tended to the undervaluing of feeling. . . . He had a real impatience of attributing praise to feeling, or of any but the most sparing reference to it, either in the estimation of persons or in the discussion of things.

From the winter of 1821, when I first read Bentham, . . . I had what might truly be called an object in life: to be a reformer of the world. My conception of my own happiness was entirely identified with this object. The personal sympathies I wished for were those of fellow labourers in this enterprise. . . . I was accustomed to felicitate myself on the certainty of a happy life which I enjoyed, through placing my happiness in something durable and distant. . . .

This did very well for several years, during which the general improvement going on in the world, and the idea of myself as engaged with others in struggling to promote it, seemed enough to fill up an interesting and animated existence.

But the time came when I awakened from this as from a dream. It was in the autumn of 1826. I was in a dull state of nerves, such as everybody is occasionally liable to; unsusceptible to enjoyment or pleasurable excitement. . . .

In this frame of mind it occurred to me to put the question to myself: ‘ Suppose . . . that all the changes in institutions and opinions which you are looking forward to, could be completely effected at this very instant, would this be a great joy . . . to you ? ’ And an irrepressible self-consciousness distinctly answered ‘ No ’. At this my heart sank within me; the whole foundation on which my life was constructed fell down.

In vain I sought relief from my favourite books . . . I read them now without feeling. . . . I sought no comfort by speaking to others of what I felt. If I had loved any one sufficiently to make confiding my griefs a necessity, I should not have been in the condition I was.

These were the thoughts which mingled with the dry heavy dejection of the melancholy winter of 1826–7.

I frequently asked myself, if I could go . . . on living, when life must be passed in this manner. I generally answered to myself that I did not think I could possibly bear it beyond a year.

When, however, not more than half that duration had elapsed, a small ray of light broke in upon my gloom. I was reading, accidentally, Marmontel's *Mémoires*, and came to the passage which relates his father's death, the distressed position of the family, and the sudden inspiration by which he, a mere boy, felt and made them feel that he would be everything to them. A vivid conception of the scene and its feelings came over me, and I was moved to tears. From this moment my burden grew lighter. The oppression of the thought that all feeling was dead within me was gone. . . .

The experiences of this period had marked effects on my opinions and character. . . .

I did not, for an instant, lose sight of . . . that part of the truth which I had seen before. I never turned recreant to intellectual culture. . . . (But) the cultivation of the feelings became one of the cardinal points in my ethical and philosophical creed. And my thoughts and inclinations turned in an increasing degree towards whatever seemed capable of being instrumental to that object. I now began to find meaning in the things which I had read or heard about the importance of poetry and art as instruments of human culture. But it was some time longer before I began to know this by personal experience. . . .

This state of my thoughts and feelings made the fact of my reading Wordsworth for the first time (in the autumn of 1828) an important event of my life. . . . What made Wordsworth's poems a medicine for my state of mind was that they expressed not mere outward beauty, but states of feeling, and of thought coloured by feeling, under the excitement of beauty.

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## 15

[*The Journal of a Disappointed Man* (W. N. P. Barbellion).]

This journal was published by its author under the *nom de plume*, W. N. P. Barbellion, just before his death in 1919. He was a young zoologist of great promise, who was defeated by the lingering and dreadful illness which killed him at 30 years of age. In 1903 he was 14 years old.

January 3, 1903. Am writing an essay on the life history of insects, and have abandoned the idea of writing on 'How Cats spend their Time'.

January 17. Went out with L. catapult shooting. While walking down the main road saw a goldfinch, but very indistinctly; it might not have been one. Had some wonderful shoots at a tree creeper in the hedge about a foot away from me. While near a stream L. spotted what he thought to be some wild duck, and brought one down, hitting it right in the head. He is a splendid shot. We discovered on examining it that it was *not* a wild duck at all, but an ordinary tame duck, a hen. We ran away, and to-night L. tells me he saw the farmer enter the poulterer's shop with the bird in his hand.

January 19. Went to A—— Wood with S. and L. Saw a barn owl (*Strix flammea*) flying in broad daylight. At A—— Woods, be it known, there is a steep cliff where we were all out climbing to inspect and find all the likely places for birds to build in, next spring. S. and I got along all right, but L., being a bit too careless, let go his hold on a tree, and fell headlong down. He turned over and over and seemed to us to pitch on the back of his neck. However, he got up as cheerfully as ever, saying, 'I don't like that—a bit of a nasty knock.'

February 8. Joe became the mother of one kitten to-day. It was born at 1.20. It is a tiny little thing. One would almost call it deformed. It is grey.

March 18. Our goldfinch roosts at 5.30. Joe's kitten is a very small one. 'Magpie' is its name.

March 28. Went our usual ramble. But we were unfortunate from the very beginning. First, when we reached the 'Nightjar

Field ', we found there were two men at the bottom of it cutting the hedge, so we decided not to venture on, as Gimbo and Bounce were with us, and it would look like poaching. Later on, we came to a splendid wood, but had to withdraw hastily from it, an old farmer giving us a severe chase. There were innumerable rabbits in the wood, so, of course, the dogs barked hard. . . .

April 2. I was glad yesterday to see the egg season so well in. I shall have to get blow-pipes and egg drills. Spring has really arrived, and even the grasshoppers are beginning to stridulate, yet Burke describes these little creatures as being ' loud and troublesome ', and the chirp unpleasant. Like Samuel Johnson, he must have preferred brick walls to green hedges. Many people go for a walk and yet are unable to admire Nature simply because their power of observation is untrained. Of course some are not suited to the study at all and do not trouble themselves about it. In that case they should not talk of what they do not understand. . . . I might have noticed that I have used the term ' Study of Nature '. But it cannot be called a study. It is a pastime of sheer delight, with naught but beautiful dreams and lovely thoughts, where we are urged forward by the fact that we are in God's world which He made for us to be our comfort in time of trouble. . . . Language cannot express the joy and happy forgetfulness during a ramble in the country. I do not mean that all the ins and outs and exact knowledge of a naturalist are necessary to produce such delight, but merely the common objects—Sun, Thrush, Grasshopper, Primrose, and Dew.

April 21. S. and I have made a little hut in the woods out of a large natural hole in the ground by a big tree. We have pulled down branches all around it, and stuck in upright sticks as a paling. We are training ivy to grow over the sticks. We smoke Pioneer cigarettes here and hide the packets in a hole under the roots of the tree. It 's like a sort of cupboard.

August 6. In the evening, S. and I cycled to S——, and when it was dark we went down on the rocks and lit a fire, which crackled and burnt in the dusk of the evening. Intend to do a bit to beetles these holidays. Rev. J. Wood in the *B.O.P.* has incited me to take them up, and it is really time, for at present I am as ignorant as I can hang together of the Coleoptera.

Christmas, 1904–5.

Christmas Day. Mother and Dad wanted to give me one of G. A. Henty's, but, fearing lest I did not want it, they did not put my name in it, so that if I wished I could change it. Intend doing this. Am reading the *Origin of Species*. It requires careful study, but I understand it so far and shall go on.

December 26. I have caught nothing in my traps yet. A little while ago I set a springe and two horse-hair nooses in the reed-bed for water rails. I have bought a book on practical trapping.

1905.

January 15. I am thinking that on the whole I am a most discontented mortal. I get fits of what I call 'What's the good of anything ?' mania. I keep asking myself incessantly till the question wears me out, 'What's the good of going into the country naturalizing ? What's the good of studying so hard ? Where is it going to end ? Will it lead anywhere ?'

February 17. When I can get hold of any one interested in Natural History I talk away in the most garrulous manner and afterwards feel ashamed of myself for doing it.

February 6, 1910. Still visit Dr. ——'s surgery every week. . . . Have to keep out of doors as much as possible.

The intense internal life I lead, worrying about my health, reading (eternally reading), reflecting, observing, feeling, loving, hating, with no outlet for superfluous steam . . . without any friends or influence of any sort, without even any acquaintances except my colleagues in journalism (whom I contemn)—all this will turn me into the most self-conscious, conceited, mawkish, *gauche* creature in existence.

March 6. The facts are undeniable ; Life is pain. No sophistry can win me over to any other view. And yet years ago I set out so hopefully and healthfully—what are birds' eggs to me now ? My ambition is enormous but vague. I am too distributed in my abilities ever to achieve distinction.

June 30. My egoism appals me. Likewise the extreme intensification of the consciousness of myself. Whenever I walk down the High Street on a market day, my self-consciousness magnifies my proportions to the size of a Gulliver—so that it is grievous to reflect that in spite of that the townsfolk see me only as an insignificant youth who reports meetings in shorthand.

October 23. At present, ambition consumes me. I was ambitious before I was breeched. I can remember wondering as a child if I were a young Macaulay or Ruskin, and secretly deciding that I was. My infant mind even was bitter with those who insisted on regarding me as a normal child and not as a prodigy. Since then I have struggled with this canker for many a day, and as success fails to arrive it becomes more gnawing.

(*By kind permission of Messrs. Chatto & Windus.*)

## 16

[R. Wagner, *Mein Leben*, p. 29.]

In July 1830 Richard Wagner was 17. He lived in Leipzig, a university town. Germany was in a state of revolutionary excitement very like its condition in November 1918. The people demanded constitutions. At such a time—when there are street demonstrations, movements of great crowds, one cry from a thousand throats, one cause in a thousand minds, then society is using its unconscious influences with the greatest power. The extract shows how Richard Wagner acted under the mastery of imitation, suggestion, and sympathy.

[1830] By this time, the Students' Clubs, existing only in Germany, were increasing and flourishing. The members wore clothes of the ordinary cut; they were even rather dandies; but they were distinguished from other people by their vivid colour schemes, and especially by the great display of their various club colours. The *Comment* was their text-book of pedantic rules of abrupt, exclusive behaviour towards middle-class people. From one point of view, it was very nonsensical. But I thought of it as the charter of freedom from the rules of School and Home. I yearned to become a student; and this longing united with my growing dislike of the dry school work, and my increasing passion for writing wild poetry.

[In July 1830], special editions of the *Leipziger Zeitung* brought the news of the July Revolution in Paris. . . . It was from that day that the world became to me a real creation of History, and naturally I became a violent Revolutionary. I thought of the Revolution as a mighty and victorious uprising of the people, pure of all those stains which had disgraced the first French Revolution. . . . Our Saxony was affected ; there was real street fighting in Dresden . . . in Leipzig itself, disorder broke out. Politics in Leipzig then meant nothing but the antagonism between the students and the police. Some students had been locked up, because of some street row. They were now to be freed. The students had been restless for a day or two. One evening they assembled in the Market Place. Each ' Club ' gathered round its seniors, and behaved with a certain ceremony (as directed in the *Comment*), and this impressed me immensely. They sang ' Gaudeamus igitur ', formed columns, and marched off, escorted by all the young men who sympathized with them. They tramped off to the University buildings to break open the prison there. . . . My heart beat as though it would choke me, as I too marched to this ' Taking of the Bastille '. That, indeed, did not quite come off. In the courtyard Rector Krug, with his grey head bare, stopped the procession. The prisoners, he said, had already been released at his own request. They cheered him to the echo. The matter seemed finished. But the tension had been so great that revolution in some form was bound to come. Suddenly the call was given to go to execute the ' Justice of the People ' upon a certain hated magistrate . . . in a certain alley. . . . I got there with the tail end of the crowd. The house had already been broken into, and very great violence had been used. I still recall with horror what an intoxicating effect this strange, furious action had upon me. . . . I cannot deny that I took part with the young men who were breaking the furniture like madmen, as though I had been possessed, although I really had no personal interest in it whatever. I do not believe that the ostensible reason for this outrage . . . had any weight with me whatever. It was simply the sheer frenzy of such outbursts of popular feeling that swept me into the current of madness. . . . Scarcely was the cry raised, ' Forwards ! ' than there I was again, right in the flood tide which set towards the other end of the town. There our deeds were no less heroic. . . . I cannot recall that either I or my immediate companions drank anything, to increase our intoxication. I only know that at the end I was in the state which usually follows a drinking bout. I awoke next day out of a wild dream, as it were, and had to convince myself that I really had done what I thought I had, . . . by a trophy—the tattered remains of a red curtain.

On the following evenings the working class imitated the bad example given by the students. They attacked the houses of unpopular manufacturers and others. As there were no soldiers in Leipzig, and the police was disorganized, it was the students who were organized to keep the peace. Now began their time of glory, such as even I had hardly ventured to dream of for them. . . . Alas! I was not yet a student. But I secured part of the joy of full University standing beforehand. I ran after the leaders whom I admired the most, and forced myself on them, half by impudence, half by servility. Luckily, I could recommend myself to these 'Cocks of the Walk' by my relationship to the rich printer in whose grounds stood the head-quarters of these champions. . . . For several weeks they kept guard there day and night, . . . and there I was, in the midst of the very finest swaggerers of the University, administering abundant hospitality to them, loved and honoured by them—an Orgy for my ambition, which was to be a student. . . . I never missed a day, or even a night, on guard. . . . I held out to the very last, and made the most astonishing acquaintances for my age. Many of the wildest specimens remained in Leipzig after the disturbances were over, and peopled it with an extraordinary collection of the most dissipated types of men. . . . I followed them faithfully from the guard rooms to the common beer-houses to which they retired; and the aim of my life was, to get made a student myself, as quickly as possible. But this could only be done if I entered a Secondary School again. . . . So I went to St. Thomas's School in the autumn of 1830, simply meaning to qualify for the school-leaving examination by a nominal attendance. To me, the chief interest was that I founded a sham students' club among my friends. It imitated real students' clubs in every little detail. As in them, we read the *Comment* and practised duelling; we invited several famous students to our inaugural meeting, at which I acted as 'Sub-Senior' — in white buckskin breeches and big jack-boots.[1] All this gave me a foretaste of the happiness I should enjoy as soon as I was really a student. But the masters at St. Thomas's were not prepared to further my student ambitions on such easy terms. At the end of the half-year, they found that I had done practically no work for them, and they could not see that I had earned the right to qualify for the University. But I had to get it done somehow; so I told my family that I had decided not to study at the University for a profession, but for a musical career . . . I presented myself at once before the Rector of the University to be registered as a student of music, and they did so at once, on payment of the usual fees. I was in the greatest hurry, for the Easter holidays began in a week, when the students all left Leipzig, so that then I could not join a students' club until after the vacation. To stay at home in Leipzig all those weeks without the right to wear the Club colours that I so yearned for, seemed quite unendurable. Straight from the Rector I rushed to the 'Duelling Ground', to apply for entry to the Club 'Saxonia'. . . . My aim was attained; I could wear the colours of the 'Saxonia'. . . . In the short week during which my club was still in Leipzig, I got a splendid 'Saxonia' cap, richly embroidered in silver, from a man called Müller. I was seized with such a craving for this cap, that I managed to buy it from him, as he wanted money for his journey home. Thus I remained, during the Easter vacation, the sole representative of the 'Saxonia' in Leipzig.

## 17

[H. M. Stanley, *In Darkest Africa*, i. 377.]

Emin Pasha was a European, employed in 1878 by the Khedive of Egypt to govern the Equatorial Provinces. In 1887, after the Mahdist conquest of Khartoum (Emin Pasha being cut off in his remote region), H. M. Stanley led a relief expedition to his aid. He left Congo mouth on March 18, 1887.

On April 29, 1888, Emin Pasha and Stanley met upon the shore of the Albert Nyanza, after the expedition had undergone incredible toils and losses, and had struggled for a year through the gigantic and primaeval forest.

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[1] Part of the official uniform of German students.

Then Stanley asked him, 'Will you come away with us, or will you stay here?'

There ensued a piece of willed action.

April 30, 1888. This evening Emin Pasha came ashore and we had a lengthy conversation, but after all I am unable to gather in the least what his intentions may be. . . .

When I propose a return to the sea to him, he has the habit of tapping his knee, and smiling in a kind of 'We shall see' manner.

After laying before him at some length the reasons for the abandonment of the Equatorial Provinces by Egypt, he replied, 'I see clearly the difficulty Egypt is in as regards retention of these provinces, but I do not see so clearly my way of returning. . . . My "instructions" do not tell me that I must quit, but they leave me a free agent.'

. . . . . . . . . .

(Stanley.) Well, then, our instructions are to carry a certain amount of ammunition to you, and say to you . . . 'Now we are ready to guide you out of Africa, if you are willing . . . , but if you decline going, our mission is ended.'

Let us suppose the latter, that you prefer remaining in Africa. Well, you are still young, only 48; your constitution is still good. Let us say you will feel the same vigour for five, ten, even fifteen years longer, but the infirmities of age will creep on you, and your strength will fade away, then you will begin to look doubtingly upon the future prospect and mayhap suddenly resolve to retire before it is too late. . . . Say that you reach the Congo, . . . how will you maintain your people, for food must then be bought? And supposing you reach the sea, what will you do then? Who will assist you to convey your people to their homes? You rejected Egypt's help when it was offered, and, to quote the words of the Khedive, 'You are not to expect further aid from Egypt.'

If you stay here during life, what becomes of the provinces afterwards? Your men will fight amongst themselves for supremacy. . . . If your provinces were situated within reasonable reach of the sea, . . . I should be one of the last to advise you to accept the Khedive's offer, but here[1] . . . were I in your place, I would not hesitate one moment what to do.'

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[1] On the shore of the Albert Nyanza.

'What you say is quite true,' replied the Pasha, 'but we have such large numbers of women and children. . . . How can they all be brought out of here?' . . .

'The women must walk, for such children as cannot walk, they will be carried on donkeys, of which you say you have plenty.' . . .

'They will require a vast amount of provisions for the road.'

'Well, you have a large number of cattle—some hundreds, I believe. These will furnish beef. The countries through which we pass must furnish grain and vegetable food. And when we come to countries that will accept pay for food, we have means to pay for it. . . .'

'Well, well, we will defer further talk of it until to-morrow.'

May 1. About 11 a.m. Emin Pasha came ashore, and upon being seated we resumed in a short time our conversation of last evening.

'What you told me last night', began the Pasha, 'has led me to think that it is best we should retire from Africa. The Egyptians are very willing to go, I know. . . . But of the Regulars who compose two battalions, I am very doubtful. They have led such a free and happy life here, that they would demur at leaving a country where they enjoy luxuries such as they cannot hope for in Egypt. They are married, and besides, each soldier has his harem. Most of the Irregulars would doubtless retire, and follow me. Now, supposing the Regulars refused to leave, you can imagine my position would be a difficult one. Would I be right in leaving them to their fate? Would it not be consigning them all to ruin? . . . On my retiring, all recognized authority and discipline would be at an end. . . .'

'It is a terrible picture you have drawn, Pasha,' I said. 'Nevertheless, bred as I have been to obey orders, no matter what may happen to others, the line of your duty as a faithful officer of the Khedive seems to me to be clear.

'All you have to do, according to my idea, is to read the Khedive's letter to your troops, and ask those willing to depart with you to stand on one side, and those preferring to remain to stand on the other. . . . If those who remain number three-fourths or four-fifths of your force, it does not at all matter to any one what becomes of them, for it is their own free choice; nor does it absolve you personally from the line of conduct duty to the Khedive directs.'

'That is very true,' replied the Pasha. . . . 'Well, I shall send the steamer down to-morrow with the Khedive's letter, . . . and perhaps they will be willing to depart with us. If the people go, I go; if they stay, I stay.' . . .

In the afternoon Emin Pasha came again to my tent, and during our conversation he said that he had resolved to leave Africa, 'if his people were willing; if not, he would stay with them'.

[Stanley went back, many months' journey, to fetch his rear-guard, while Emin Pasha was to collect those who were willing to leave, and to join Stanley's representative officer again in about two months' time. Emin Pasha did not come until February 1889. Even then, even after his soldiers had rebelled against him, which they did in August 1888, Emin Pasha could not make up his mind whether it was right to leave these soldiers behind him, or not. Captain Casati, his second in command, thought not.]

March 31, 1889. The Pasha appeared this morning at my tent and informed me that Captain Casati was not well pleased with his departure from the Equatorial Province; that he thought it was his duty to stay.

'Where, Pasha?'

'With my people.'

'What people, please?'

'Why, with my soldiers.'

'Well, really now, I was under the impression that you wrote me some time ago . . . that you were a prisoner to your own soldiers, . . . that they had threatened to take you in irons, strapped on your bedstead, to Khartoum,[1] and I am sure you know as well as I do what that means.'

'That is true. But you must not think I am about to change my mind. As I said to you, I leave with you on the 10th of April next. That is settled. But I wish you would see Casati about this.'

[1] Then in the possession of the Mahdi.

When these two men get together for a special chat, the result is that the Pasha feels depressed, and vexes himself unnecessarily with fears that he may be charged by his rebellious troops with deserting them. Casati seems elated somehow at having caused these doubts. What Casati's object is, more than to secure a companion in misery, is to me unknown.

I proceeded to Captain Casati's quarters. . . . At once Casati commenced to lecture the Pasha in the name of honour and duty, and to persuade him that he was morally wrong in abandoning his troops. . . .

'But the Pasha, Captain Casati,' I said, 'never had an intention of abandoning his troops . . . it is those troops who have opposed him. . . .'

'The governor of a fort should never surrender his charge,' replied Casati.

'I quite agree with you in that, if his troops remain faithful to him, but if his troops arrest him, haul down the flag and open the gates, what can the poor governor do ?' . . .

'No, I do not agree with you,' said the Captain with emphasis. 'The Pasha should remain with his people.' . . .

Casati was not convinced, and I see that the Pasha is much troubled in mind. They will meet again to-night, and argue the moral aspect of the case again. God knows what their intentions will be to-morrow. Neither of them realizes the true state of affairs. . . .

Before retiring for the night, the Pasha came to my tent and assured me that he would leave on the 10th of April.

(*By kind permission of Lady Stanley and Messrs. Sampson Low, Marston & Co., Ltd.*)

## 18

[F. Warner, *The Study of Children*, p. 164 (1897).]

### A DULL AND BACKWARD BOY

Age, 11 years. Place in school, Standard II

A. Body. Development, features, &c.

Head. Large. Circumference 22 inches, frontal bosses.

Face. Features coarse, none deformed.

Ears. Both outstanding ; large, no pleat to ear.

Nose.
Palate. Narrow; upper lines of teeth meet at a straight angle in front.
Growth. Well grown: 54 inches.

B. Nerve signs. Postures, movements, action. Expression.
General balance of body. Slouches. No exact symmetry of balance.
Expression. Bright, not very intelligent-looking.
[Under eyelid]. Good tone.[1]
Eye movements. Can fix eyes well; looks about by moving head, not eyes.
Head balance.
Hands. Left held lower than right. Balance in feeble posture. Response in action rather slow and uncertain.

C. Physical Health and Nutrition. . . . Robust. . . . Weight, 76 lb.
School Report. Does work in school, but is slow and inaccurate, and could not pass examination. Dull, but not defective.
Report. Appears capable of work. . . . Possibly would do better with boys more of his own age.

(*By kind permission of Messrs. Macmillan & Co.*)

## 19

[F. Warner, *The Study of Children*, p. 174.]

### A FEEBLY GIFTED CHILD

Age, 13 years. Place in school, Class of special instruction.

A. Body. Development, features, &c.
Head. Small. Circumference 19 inches, . . . good shape, no bosses. . . .
Face. Features, except nose, fairly made.
Ears. Normal.
Nose. Bridge . . . wide and rather flat, or spread out.
Palate. Narrow.
Growth. Fairly tall; height, 58.5 inches.

B. Nerve signs. Postures, movements, action. Expression.
General balance of body. Slouching. Movements slow; she tends to retain any attitude assumed. Imitation of movements fairly accurate.

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[1] This means no fullness under the lower eyelid.

Expression. Fairly intelligent.

Eye movements. Follows well an object moved, and she fixes eyes on an object.

Head balance. Not quite erect.

Hands. Balance in nervous posture.

She squints. The mouth is always open. Speaks fairly well, but utterance is thick; there appears to be obstruction in the nose.

C. Physical Health and Nutrition. A little pale, but not thin. Weight, 90 lb.

School Report. . . . A good child, truthful, honest; will buy and get change correctly. Counts well, knows value of money, reads simple words. Can do needlework and domestic work if urged to.

Report on Child. Is small-headed and feebly gifted mentally, but appears educable; she is not troublesome, but wanting in spontaneous self-helpfulness, and probably in self-protection. She has benefited and will probably continue to benefit, by daily training; she will need some friendly supervision and industrial training after leaving school. Medical attendance as to the throat is necessary. She probably requires spectacles.

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